

ESSENTIALS OF
PSYCHOLOGY

DEGLMAN



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ESSENTIALS OF PSYCHOLOGY

BY

GEORGE A. DEGLMAN, S. J., Ph. D.

Head of the Department of Philosophy

Marquette University

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INTRODUCTION

Psychology is that section of philosophy which considers the soul. The soul, in its most general sense, denotes that which makes a being live; it is the first principle of life in a living being.

If we regard only the etymology of the word, the object of psychology should be co-extensive with all living beings, vegetable and animal as well as man. Custom, however, has restricted it at the present day, so that psychology is generally limited to the study of man. Accepting this restriction, we know from the direct testimony of consciousness that man who is a living, sentient and rational being is one being. It is the *man* who feels and thinks, not his soul only, just as it is the *man* and not his body only that works when his hands are in motion. Hence we must consider the complete human nature as the seat of life, sensation and thought, and look upon the soul as the first principle in virtue of which we are alive, sentient and capable of rational thought.

To include all living beings we may define psychology as the science of the vital principle which intrinsically constitutes living beings.

The *proper* object of psychology, then, is the *vital principle* inasmuch as it is the constituent part of the organized body, and we may be warranted in extending our study to the various forms of life—organic life, sentient life, and rational life.



PART I

ORGANIC OR VEGETATIVE LIFE

CHAPTER I

IDEA OF LIFE IN GENERAL.

Thesis 1—Life Consists in the Power of An Agent to Perfect Itself by Immanent Activity.

Statement of the Question—1. Life and movement are so intimately associated in the popular mind that the absence of all movement is considered an infallible sign of death. However, not every kind of movement means life, but only that movement which is *immanent*, whose principle is intrinsic to the agent. Hence life may be defined as *the power of an agent to perfect itself by immanent activity, or, the power of self-movement.*

2. Life, we say, consists in *the power*, etc. Life may be considered in the first place as embracing the vital faculties and their substantial principle, and, secondly, as immanent or vital action. The *vital faculties* are the *proximate principle* of immanent activity, whilst the *vital principle* is the *ultimate principle*.

We say that life consists in the *power*, etc., because actual immanent action is not absolutely necessary for the essence of life. Facts prove that there is latent life in seeds, microbes, or in dried-up spores of certain plants. As long as they remain in this state such beings are only

potentially alive, they are but machines ready for action. For them to become actually alive certain material conditions are necessary, such as moisture, certain degrees of heat, etc.

We say, moreover, that life consists in the power of *immanent activity*. Here lies the essential difference between living and non-living beings. Immanent activity is action by *which a being moves itself*. It implies two things:

(a) that the action proceeds from a principle *intrinsic* to the agent;

(b) that the action *terminates* in the agent.

Hence, the living being is both the principle and the term of the action. Therefore, every action that passes over to the perfection of another being is *non-vital* because it is *transitive*.

We say in so far as it is "transitive," since an action which is immanent may at the same time produce an effect outside of the agent; e. g. the action of a sculptor in the use of a chisel.

Non-living beings merely have the capacity of *passive motion*, that is, the power of being moved.

It must also be observed that the words "movement" and "move," in the present connection, include every kind of internal activity, vegetative, sentient and rational, not only local movement.

Life consists in the power of an agent to *perfect itself*, etc. Since the effect of immanent activity remains within the agent and consists in the exercise of its faculties, it is clear that immanent activity perfects the agent.

By *agent* we mean created agents. Our definition of life cannot apply to God, since life in God

is without any imperfection and implies the fullness of perfection.

Note—The thesis is an explanatory one and consequently cannot be strictly demonstrated. Proof must be furnished whenever we apply the definition to a particular class of beings. However, it must be noted that the definition is not an “a priori” one; it is based on observed facts.

We may show the correctness of the definition in the following way:

That definition of life is correct which contains those essential notes whose presence constitutes a being a living being and whose absence classifies it as non-living.

Now the power of immanent activity contains these notes. Therefore.

To illustrate: All admit that animals are living beings. Now, as soon as an animal is capable of exercising immanent activity it lives, and it continues to live so long as it has this power.

THE VITAL PRINCIPLE

A. EXISTENCE OF THE VITAL PRINCIPLE

Thesis 2—In All Living Beings a Vital Principle Must Be Admitted Which Is Essentially Different From the Forces of Matter.

Statement of the Question—1. Materialists derive all vital activity from the forces of inanimate matter. They endeavor to explain the phenomena of life along mechanical lines, by various vibratory motions of the atoms, or by the interplay of physico-chemical forces; so Tyndall, Hux-

ley, Spencer, Vogt, Du Bois Reymond, Haeckel, and others.

2. The Schoolmen, while contending that the vital principle is distinct from matter and its forces, do not by any means exclude the activity of the latter. They admit that the vegetative process in plants, animal and man, and the sensitive process in animal and man, largely depend on physical and chemical forces; but they rightly maintain that these forces are *guided* by the vital principle so that they may perform their proper activities.

3. The *vital principle* is a substantial something which by its presence in the an organism is the last source of the entire organization and of every vital activity. (Gruender.)

4. *Living beings* are organized bodies; or, those bodies which are composed of heterogenous parts so united that each part exercises its own proper function, yet dependent on the rest, and in such a manner as the well-being of the whole organism demands.

5. Although the thesis is true also of man, yet we do not expressly speak of man here since we shall make the human soul the subject of a special treatise.

6. By inorganic matter we mean dead matter.

Proof—A vital principle, essentially different from the forces of inorganic matter, must be admitted in those beings which manifest actions and properties essentially different from the actions and properties of inorganic matter.

But living beings manifest such actions and properties. Therefore.

Proof of the Minor—1. Living Beings Manifest Actions.....

(a) There is an *energy* in living beings which enables them to *evolve* themselves into a complete organism from a *tiny cell* by means of assimilation of extraneous matter.

This complex activity, however, is essentially different from the physico-chemical forces of inorganic matter.

For the physico-chemical actions pass over to foreign subjects and do not begin and terminate in the agent, so as to enable it to grow from within and construct its own organism.

(b) In living beings by the same energy by which they grow into complex organisms, a process of *metabolism*—of waste and repair—goes on incessantly, and, as the one or the other is more active, we have growth or degeneration.

This fact proves that there is a marvelous *unity of direction* in the various parts of the organism whereby the inferior functions are made subservient to the superior, and whereby all conspire to the one end of procuring the well-being of the individual and the preservation of the specific type.

But, this unity and harmony cannot be explained unless we admit in living beings a principle which controls these various forces and directs them to their proper end.

If this is not conceded, we cannot explain why living beings should be governed in their entire existence by laws peculiar to themselves, or why their actions and effects are admittedly different from those of non-living beings.

(c) Whenever the organism of a living being is turned aside from its natural condition by *sickness* or any *external cause*, it endeavors by an *innate force* to repair the injury inflicted and protect itself against agencies constantly working towards its destruction.

Now, such an effect cannot be attributed to physico-chemical forces because it is well known that inorganic beings are preserved by a state of changeless repose.

Therefore this effect must be attributed to a principle essentially different, to an internal force which governs the stream of activities described as the phenomena of life.

This force we call the vital principle.

2. *Living Beings Manifest Properties*.....

Living beings differ from inorganic beings:—

(a) in *Shape* and *Structure*.

Living beings have a determined shape varying according to each specific type.

Inorganic bodies have no determined shape, unless we except crystals. Even in the case of the latter there is a difference. The shape of crystals is *angular* whereas living beings, both in their complete organisms and in their several parts, are usually bounded by *curved* lines.

Again, living beings are *differentiated* organisms; whilst inorganic bodies are *homogeneous*.

(b) *In Origin*.

Living beings take their origin from living beings of the same specific type; whilst inorganic bodies arise from chemical analysis or synthesis of bodies specifically different.

(c) *In Chemical Composition.*

All living beings are compounded from elements which, in order to constitute the organism, are united into compounds quite peculiar to living beings.

Though these compounds consist of the same elements as inorganic bodies, they have this peculiarity that they are of highly complex proportions.

Moreover, scientists admit that protoplasm is so complex chemically as to defy complete analysis, although the most important constituents are few and when found in other chemical compounds are more readily analyzed. This is true even of dead protoplasm.

(d) *In Nutrition.*

Living beings have the power of assimilation, i. e., they manufacture proteids out of inorganic matter and elaborate foreign substances into their own. Living beings change constantly; there is a continual process of decay and repair.

Inorganic matter, on the contrary, is stable and tends to constant stable equilibrium.

(c) *In Growth.*

Living beings, after they have reached the proper perfection of their species, begin to decay from within and finally perish by disintegration into elements of inorganic matter. The whole development of organic beings is a "progress towards death."

Inorganic bodies of themselves have no limited or definite duration; they change only when acted upon by external agents.

B. THE VITAL FACULTIES, THE PROXIMATE PRINCIPLES OF LIFE.

1. *Idea of a Faculty.* The vital principle is the first principle of life. However, in order to exercise its activities, it must be equipped with certain powers, which are called faculties.

In general, a faculty is the *proximate ground of some kind of activity*. A *vital faculty* is one by which the agent can perform immanent actions.

2. *Division of Vital Faculties.* The vital faculties are of two kinds: *Organic* and *Non-Organic*.

(a) *Organic* faculties are those which exist in the animate composite and whose activities cannot be exercised *without an organ*; such are the senses.

(b) *Non-Organic* faculties are those which exist not in the composite but in the soul alone, and, consequently, *can* exercise their activity without the concurrence of an organ; such are the intellect and will in man.

3. *Classification.* The principle by which we may classify the faculties is not something intrinsic to them but rather some sign by which the nature of the being is manifested. Hence, *vital faculties are classified according to the nature of each activity and the objects towards which they tend*.

This proposition is proved thus:—

All beings must possess those powers which are demanded by the end to which they are naturally directed.

Now, the vital faculties are by their nature directed to the exercise of diverse activities regarding certain objects.

Therefore, they must be such by their nature as these activities and their specific objects demand.

Therefore, too, from these activities and proper objects we may recognize the essential difference between the vital faculties.

CHAPTER II

VEGETATIVE LIFE IN PLANTS.

A. EXISTENCE AND FUNCTIONS OF VEGETATIVE LIFE IN PLANTS.

*Thesis 3—Plants Exercise Vegetative Life Only.
The Chief Functions of Vegetative Life Are Nutrition, Growth and Reproduction.*

Statement of the Question—1. The lowest and most universal grade of life in the visible universe is the vegetative. It is the lowest, because it is the least independent of matter in its functions. It is the most universal, because it is common to plants, animal and man.

2. Plants, as we take the term here, are all those living organisms which are commonly judged to be purely vegetative, such as trees, flowers, etc.

3. The chief functions of the vegetative life are nutrition, growth and reproduction. We say they are the *chief* functions, because they are directed not as a means to other functions, but because of themselves they obtain their own proper end.

Although nutrition is prerequisite to growth, and growth and nutrition to reproduction, yet each has its independent and proper end. For, nutrition continues even when the vegetal plant being has reached the proper perfection of bulk and shape, and growth and nutrition continues when reproduction has ceased.

The *complete* and *remote* end, however, to

which all vegetative activities are directed, is the development of the living organism to its proper perfection and the reproduction of the organism; this end is obtained by all three functions conjointly.

Nutrition is the function by which the living organism converts external substances into its own. This process implies various operations on the part of the living being:

(a) *Absorption* of extraneous substances through roots, leaves, etc.

(b) *Preparation* of the raw materials by various elaborate chemical processes;

(c) *Circulation* of the food thus elaborated throughout the organism.

(d) *Assimilation* or conversion of the food into the living substance of the organism. This is strictly the *act* of *nutrition* or the *vital act*. We may designate the previous actions vital only in so far as they are accomplished under the influence and direction of the living organism and for its benefit.

Growth is that function by which the living being builds up its complete organic structure according to a definite morphological type out of the nutriment assimilated.

Reproduction is that function by which the living organism produces from its living substance a germ, seed or part, capable of evolving itself into a new living organism similar in specific type to the parent plant.

4. *Opponents*. Among the ancient philosophers many maintained the theory of Panpsychism, according to which everything in the

world possesses some kind of cognitive life; Empedocles, Thales, Parmenides, etc.

Among modern philosophers Fechner, the father of modern psychology, defended cognitive life in plants. Fechner has adherents among other modern writers: cf. Titchener, Text Book, p. 451; Wundt-Titchener, Principles of Phys. Psychology, v. I, p. 31; Gruender, Psychology Without a Soul, chap. I.

5. By *sensation* we understand that act by which material objects are vitally represented according to their sensible qualities—color, sound, taste, etc.

Since all orders of animals below the anemone have no nervous system, sensation does not universally depend on the nervous system. It must, therefore, be a property of protoplasm.

6. *Spontaneous Movement* is that movement which is performed under the direction of the elicited appetite, i. e., by the tendency towards the good as recognized by sense or intellect.

Part I—Plants Exercise Life.

Proof—Life consists in immanent action, i. e., in action which begins and terminates in the agent.

But, nutrition, growth and reproduction are actions which begin and terminate in the agent. Therefore.

Proof of the Minor—In nutrition extraneous materials are absorbed by the plant and converted into its substance by its own activity.

In growth the plant, by its own energy, builds up a complete structure from the nutriment thus assimilated.

In reproduction the living organism produces from its substance a germ, seed or part, capable of evolving itself into a new living organism, similar in type to the parent plant.

Part II—Plants Exercise Vegetative Life Only.

Since there can be no question about intellectual life in plants, we prove our point by excluding sensitive life from plants.

Proof—Plants do not possess sensitive life, if (a) they do not display sufficient signs of sensitive action; if (b) sensation would be useless to them; if (c) it would be harmful to them.

But all this obtains. Therefore.

The Major—If plants do not display signs of sensation, the assertion that they possess sensitive life is gratuitous. If sensation is useless or even harmful to plants, we have positive proof for our denial of sensitive life in plants. For, faculties are a necessary complement of nature; but a necessary complement of nature cannot be useless, much less harmful.

Proof of the Minor—(a) The only signs by which we might judge that beings outside ourselves exercise sensation are:

(aa) similar organs of sensation;

(bb) similar manner of action.

But both these signs are wanting.

All grant that no organs like ours are found in plants. This is further demonstrated by experiment.

Besides, plants do not exercise any activity like ours in reference to sensitive life. For, when injured, they show no signs of repugnance, no

feeling of anger, no emotion, no flight from danger.

(b and c) Senses serve the being which has them to procure what is necessary for it, to remove things harmful to it, to fly from danger, etc.

But plants cannot have senses for this purpose.

For, the necessary nourishment is freely furnished them through the roots and leaves. If the nutriment should fail them, they could not go to seek it, since they have not the power of spontaneous local movement.

Part III—The Chief Functions Are Nutrition, Growth and Reproduction.

Proof—The object of vegetative life is the development and reproduction of the living being. Therefore, vegetative life must perform the vital functions necessary for the purpose.

Now, by reproduction the living being acquires existence; by growth it builds up its organic structure; by nutrition the life of the living being is sustained.

Moreover, these three functions are commonly enumerated by scientists as the principal functions of vegetative life.

B. TWO THEORIES REGARDING THE ORIGIN OF LIFE.

I. SPONTANEOUS GENERATION.

Thesis 4—The Contention That Spontaneous Generation Takes Place at the Present Time or Occurred in the Past Is Not Borne Out by Any Convincing Proof.

Statement of the Question—1. Spontaneous generation is the origin of a living being from lifeless matter. It is called abiogenesis to distinguish it from biogenesis—the derivation of life from life.

2. We consider spontaneous generation historically and from a twofold aspect:

(a) a class of scientists of the present day claim that spontaneous generation takes place to-day. They base their contention on various experiments performed by themselves and others on organic substances. Among these are John Butler Burke, Dr. E. Schaefer and others.

In fact, the Materialists in general champion spontaneous generation for the double purpose of destroying the essential difference between living and non-living beings and giving an account of life without the action of the Creator.

The question is not, however, of recent date only. About a century and a half ago it was held by some that spontaneous generation took place in putrified meat and the core of fruits. In the last century some endeavored to show that infusoria arose spontaneously from organic matter which belonged to living beings.

(b) Though the best scientific opinion today inclines to the belief that life comes from life, yet a further question may be asked: Where did the first living being come from? This world was once so hot that no living being could exist upon it. It cooled down and a time arrived when life could exist. Many men of science, unwilling to admit a Creator, have claimed that, although spontaneous generation does not occur at present, it must have taken place at some former period when the conditions of the earth were far different than they are now. Spencer puts the matter thus: "At a remote period of the past, when the temperature of the earth was much higher than at present, and other physical conditions were unlike those we know, inorganic matter, through successive complications, gave origin to organic matter." (Nineteenth Century, May 1886.)

Huxley (Critiques and Addresses, p. 239) thought that, if it were given him to "look beyond the abyss of geological and recorded time" he might expect to "be witness of the evolution of living protoplasm from non-living matter."

Spontaneous generation is, therefore, the logical postulate of materialistic evolution to account for the first origin of life on earth.

We shall show in part one that the arguments advanced in favor of spontaneous generation at the present time do not prove.

Proof—1. Regarding the most recent experiments it must be observed that in most cases they are performed on germs which already possess the latent potency of life. Jacques Loeb performed experiments with the eggs of sea urchins.

What he accomplished, and others like him, was to artificially fertilize the eggs and advance the growth of the embryo to maturity. But from this it does not follow that he or others produced life from non-living matter.

The fact is that some scientists vigorously oppose the hasty conclusions drawn from these experiments.

2. (a) In 1698 Redi, an Italian physician, showed that the maggots found in putrified meat had not arisen from the meat, but from the eggs of flies deposited thereon. He demonstrated the fact by covering the meat with gauze, and then no maggots appeared.

(b) Antonio Vallisnieri (1661-1730), professor at Padua, discovered that the insects which infest our apples and pears are the larvae of a nocturnal butterfly, which develop from an egg introduced into the incipient fruit at the time of blooming.

(c) Forced to acknowledge their error in the field of entomology, the adherents of spontaneous generation retreated to the domain of the infinitely small animalculae. They pretended that infusoria and other microscopic animals spring spontaneously, if not from inorganic matter, at least from organic elements which belong to living beings.

In defense of this position they usually fall back upon the unknown. On account of the imperfect means of investigation, they argue, it cannot be shown that reproduction does not take place in this way.

It needed the labors of Pasteur to solve the question in a definite manner. The experiments of this famous savant began in 1858. In 1860 a prize was offered by the French Academy for the solution of the problem. Pasteur was provoked to activity by two zoologists, Professors Pouchet and Jolly, who upheld spontaneous generation in the case of infusoria in a sterilized liquid. Pasteur demonstrated to his colleagues of the Academy of Science that no organized being, however small, developed in a liquid when germs existing in the neighboring bodies are completely shut out.

For this purpose it was sufficient to raise the temperature of the liquid to 100 degrees R. and to cork the bottles which contain the liquid with gun-cotton. The latter substance, whilst permitting the outside air to penetrate during cooling, will keep back solid particles and with them the germs of living beings. Under these conditions, if the experiment is performed with some skill, not only no animalcula will develop in the liquid, but this liquid, though suitable for fermentation, will never change.

3. *From Authority.* Note—Some of the authorities quoted are materialistic evolutionists who postulate spontaneous generation at least to explain the beginning of life on earth.

(a) In 1870 Huxley, then president of the British Association, chose for the subject of his inaugural address "Biogenesis and Abiogenesis." After a careful examination of the case for each he declared that the former was victorious all along the line.

(b) Tyndall, in his *Fragments of Science*, after describing the experiments devised by him to test the matter, concludes: "The evidence in favor of spontaneous generation crumbles in the grasp of the competent enquirer."

(c) Herbert Spencer has this to say in the *Nineteenth Century*, May 1886: "Biologists, in general, agree that in the present state of the world no such thing happens as the rise of a living creature out of non-living matter."

(d) Charles Darwin, who is supposed to have upheld the fact of spontaneous generation, in a letter to D. Mackintosh, Feb. 28, 1882, wrote: "No evidence worth anything has as yet, in my opinion, been advanced in favor of a living being developed from inorganic matter."

(e) Professor Virchow, materialist and evolutionist, said in regard of spontaneous generation at the Munich Congress of 1877: "We must acknowledge that it (spontaneous generation) has not yet been proved. The proofs of it are still wanting."

(f) Oskar Hertwig, the eminent director of the Berlin Institution for Biology and Anatomy, in his great work *General Biology* says: "In the existing condition of science there is little hope that any worker will be able to produce the simplest manifestation of life in any artificial way from non-living matter."

(g) Professor B. Moore, whose knowledge of bio-chemistry renders him a peculiarly valuable witness, says: "The mode of production of living matter is characteristic, and cannot be brought about by the action solely of inorganic

forms of energy; living matter is produced only by the action of other living matter upon the materials and forms of energy of the non-living world." (Recent Advances in Physiology and Bio-Chemistry, 1906, p. 7.)

In part two we prove that the contention of the materialistic evolutionists is not established, viz., that spontaneous generation must be postulated to explain the first origin of life on earth.

Proof—1. It is quite certain that no human being has ever seen living matter produced from non-living matter. There were living beings in existence long before man came on earth, as geology and science testify.

2. It is equally certain that we have no facts on which to base the theory that living beings were spontaneously produced at some former time. Hence the contention that the first living beings sprang from non-living matter, is a mere hypothesis and to be estimated accordingly.

3. Those who have advanced this theory have not given and cannot give the slightest suggestion, as to how the transformation from non-life to life may have taken place, or under what conditions. Nor are we told why it is impossible to reproduce these conditions today in the chemical laboratory.

4. Professor Virchow, says, in an address delivered at Wiesbaden in 1887: "Nor have any fossil remains ever been found of which it could be ever likely that it belonged to a being the first of its kind, or produced by spontaneous generation."

Note—Two points may be considered in this connection.

1. May living matter come from non-living matter? Though production of living from non-living matter has not yet been demonstrated, it is not, therefore, impossible that it may some day fall to the lot of some fortunate enquirer to announce such a discovery and to have the discovery recognized by science.

Should this ever take place, it may be well to recall the fact that spontaneous generation was held by many, perhaps all the Fathers of the Church, and that St. Thomas himself maintained that if matter does produce life, it is because the Creator has given it the power to do so.

What we claim is this, that if spontaneous generation occurred or should occur, it does so and will do so at the will of the Creator and by a power which He gave to matter. We do not deny that that power may still be latent in non-living matter, and may even continually be manifested, though we are unable so far to recognize the fact.

2. Whilst we allow all this, we must admit with all who studied the question that no approach has been made by any synthesis approaching that which would constitute living matter.

II—EVOLUTION

Note—On this subject confer authorities quoted at the end.

CHAPTER III

THE NATURE OF THE VITAL PRINCIPLE.

Thesis 5—The Vital Principle in Plants (and Animals) Is Entirely Dependent on Matter, Whose Substantial Form It Is.

Statement of the Question—1. A substantial form is one which determines the specific nature of a substance. When we say, therefore, that the vital principle in plants (and animals) is the substantial form, we mean that the vital principle constitutes them in the species of living beings.

2. We may classify the vital principles according to the manner in which they exist into two classes:

(a) the one is immaterial and capable of existing by itself; such is the human soul.

(b) the other is material and incapable of existing by itself; such are the vital principles in plants and animals.

3. The words "entirely dependent on matter" do not mean that the vital principle in plants (and animals) is made of matter of quantitative dimensions. The vital principle is, indeed, material, but at the same time it is materially simple—something like a physical energy exercising itself in a physical body. "Entire dependence on matter" signifies that for its existence as well as for its operations the vital principle is *intrinsically* dependent on matter, so that it cannot exist as such apart from matter. It "is educed from matter," as the Schoolmen express it.

In virtue of its nature the vital principle is destined to constitute in union with matter one complete being. Hence, outside that union the vital principle cannot exist. Therefore, too, it follows that the vital principle is not a complete substance.

4. In this thesis we speak of plants (and animals) only; the nature of the human soul will be explained later.

Part I—The Vital Principle in Plants (and animals) Is Entirely Dependent on Matter.

Proof—The nature of a being is made known to us by its operations or activities; “operari sequitur esse.”

Now, the operations or activities of the vegetative (and sensitive) vital principle are entirely dependent on matter.

Therefore the source-principle—the vital principle—is also entirely dependent on matter.

The Major—The nature of the cause is recognized from its effects. Hence, the vital principle, which is the cause or source of vital activities, is dependent on matter or independent of it, when its activities are intrinsically dependent on or independent of matter.

Proof of the Minor—Those activities are intrinsically dependent on matter which cannot be performed without a material organ.

But the activities of the vegetative (and sensitive) life cannot be performed without a material organ. Therefore.

The activities of the vegetative life are nutrition, growth and reproduction. But these activ-

ities cannot be performed except in and through a material organ.

(The same is true also of sensitive life.)

Part II—The Vital Principle is the Substantial Form.

Proof—That is a substantial form which constitutes a being in a determined class, essentially distinct from other beings.

But, the vital principle in plants (and animals) constitutes them in the class of living beings. Therefore.

Proof of the Minor—In every being we discover two elements one passive and determinable and common to all bodies, the other active and peculiar to each class of beings.

Now, the vital principle in plants (and animals) cannot be the passive element, because to live means to act; nor can it be the element common to all beings, otherwise all beings would live.

Therefore, nothing remains except that it is the active, determining principle; that it is the substantial form.

Cor. 1. Therefore the vital principle in plants (and animals) is not created but comes into being by reproduction. It is not created, because creation is either the production of the whole substance, complete in itself, or of an incomplete substance, capable of existing by itself—such as the human soul.

The vegetative (and sensitive) vital principle is neither a complete substance nor can it exist by itself. Hence it comes into being by generation. For, substantial forms which are not created

must be said to be the result of a change in matter. Now, no other power can be assigned to effect this change except the power of generation. Consequently, the term of generation in plants (and animals) is not the material vital principle, but the complete living composite.

Cor. 2. Therefore the vital principle in plants (and animals) is not immortal. For, the vegetative (and sensitive) vital principle exists only when united with matter for the purpose of constituting a living organism. Therefore, when the organism is broken up the vital principle, actually constituting the organism and entirely dependent on matter, perishes.

Divisibility of the Vital Principle in Plants.

The vital principle, though material, is not a substance of three dimensions. How is it divisible, then? A thing may be divided:

(a) into essential or constitutive parts, as the body and soul in man;

(b) into quantitative or integral parts.

Now, there are three views with regard to the divisibility of the vital principle in plants:

1. Some deny the divisibility of the vital principle because it is not composed of integral parts. That some plants (and animals) should live after division is explained by them by the eduction of a new vital principle from matter.

2. Others hold that the vital principle of inferior plants is divided at the division of the simpler organisms. But they maintain that the vital principle in higher organisms is indivisible.

3. Others again maintain that *all* vital principles in plants (and animals) are divisible. In

the imperfect or lower forms of organisms the vital principle lives on after division; in the case of higher organisms it perishes.

We favor this view for the following reasons:

(a) the vital principle in lower forms of life is entirely dependent on matter, and therefore follows the nature of matter. Hence, when the organism is divided, the vital principle is "per accidens" also divided.

(b) Lower organisms have a very limited variety of parts; but higher organisms are more complex and require a more diversified structure. It is on account of the great diversity of parts and functions that these higher organisms cannot be so divided that each separated part may continue to live.

PART II

SENSITIVE LIFE

CHAPTER I

SENSITIVE COGNITION.

ARTICLE 1. ORIGIN AND NATURE OF SENSITIVE COGNITION.

Sensitive life presupposes vegetal life and is built upon it.

There are various points of difference between sensitive and vegetative life:

(a) "There is commonly a marked difference in general chemical composition between vegetables and animals, even in their lowest forms; for while the former consist mainly of cellulose, a substance closely allied to starch and containing carbon, hydrogen and oxygen only, the latter are composed in great part of the three elements just named, together with a fourth, nitrogen; the chief proximate principles formed from these being identical, or nearly so, with albumen." (Baker, Kirke's Handbook of Physiology, p. 4, ed. 9.)

(b) The structure of the animal organism is such that vegetative life is not only subordinate to the sensitive, but by its union with the latter, preserves an organism fitted for sensation.

(c) The animal is nourished with food drawn from the vegetable and animal kingdoms, whereas plants take their nourishment mostly from inorganic substances.

(d) The essential difference, however, between the two grades of life lies in *sensation*.

Sensation may be defined as *the power of perceiving concrete material objects and striving after them when thus perceived*.

This definition includes the two classes of sensitive faculties—the *cognitive* and *appetitive*.

Note—Though the faculties and activities of sensitive life are common to man and animal, yet, because we can know the inner nature of the latter only by applying analogically to the animals the facts of our sensitive life, as attested by our consciousness, we are obliged to study sensitive life as we observe it in us and argue from the knowledge thus obtained to the nature of the sensitive life in animals.

By the senses we mean the entire collection of faculties which are directed to the representation of the sensible qualities of material objects.

The acts by which the sensitive faculties represent their objects are called sensitive cognitions.

Thesis 6—Sensitive Cognition Is the Vital Representation of the Object by the Sensitive Faculty, the Faculty Being Roused to Activity by the Cognitional Determinant.

Statement of the Question—1. The adequate or total cause of sensation is not found simply in the senses themselves. The senses are so many powers that by themselves are inactive. They have an aptitude to represent objects, but that aptitude remains in a potential state so long as it lacks an excitant other than itself to stimulate it.

For its transition from power to act the sense requires to receive an impression from without to arouse its activity and to determine it in some particular way. Hence, a sensory impression is the necessary complement of the sensitive power and the natural determining cause of the act of perception. We call this impression the *Cognitive Determinant*.

We may define this cognitive determinant as *a representative quality produced in the organic faculty by the sensible object, modifying and disposing the faculty to perform the act of cognition regarding that object.*

It is a *quality* because it is an accidental modification of the faculty. It is said to be *representative*, because it manifests the object and takes the place of the object in its relation to the cognitive faculty. It is *produced in the organic faculty*; for it must be produced there where sensation takes place. Since the faculty is not of itself determined to act, but is indifferent, the cognitive determinant modifies and disposes the faculty for perception.

2. However, this cognitive determinant, is not the vital representation of the object. It is only a transient modification of the faculty, prerequisite for the vital representation. The cognitive determinant is merely the last complement of the faculty, by which the faculty is united with its object and its natural indifference is raised.

When the modification has been effected, the senses, if in normal condition, must act and perceive the object.

To bring about this latter effect, there is need of an active principle on the part of the faculty. Hence, given the modification on the part of the object, the sensitive act is elicited by the activity of the sentient subject, giving expression to the mental likeness or vital representation of the object.

3. From what has been said we may define sensitive cognition as *a vital reaction by which the sensitive faculty in response to an impression or modification produced by some particular object, effects within itself a mental likeness, representation or image of the object.*

We say that sensitive cognition is a *vital reaction*; that is, an immanent action which does not emerge from the sentient faculty which produces it.

We must, however, bear in mind that sensitive cognition is at the same time, but under different aspects, *immanent* and *transitive*. The act itself is immanent, but inasmuch as it has reference to the object it is transitive.

Part I—The Sensitive Faculty Is Roused to Action by the Cognitive Determinant.

Proof—Experience and consciousness testify that the sensitive faculties are by their nature undetermined and indifferent with regard to their objects. On the other hand, knowledge is an immanent union of the subject knowing with the object known.

In order, therefore, that this natural indifference may be removed and this immanent union be brought about, the object must be somehow

united to the subject and, as it were, incorporated in it.

Now it is evident that the material object, the thing in its physical reality, does not enter into the subject, or become immanently united to it.

It must therefore be somehow replaced by a replica or resemblance.

Hence an act of perception requires a sensory impression coming from the object.

This impression produced in the sensitive faculty by the object is called the cognitional determinant.

Part II—Sensitive Cognition Is the Vital Representation of the Object by the Sensitive Faculty.

Proof—Sensitive cognition is a vital act representing a particular object.

But sensitive cognition cannot be a vital act representing a particular object, unless the faculty of its own power and activity produces the representation of the object and is thus rendered conformable to the object. Therefore.

Proof of the Minor—(a) To be a *vital* act, sensitive cognition must proceed from an active principle, intrinsic to the sentient being.

(b) To represent a *particular* object, the principle from which the vital action proceeds must be assimilated to the object before actual cognition can take place.

This, however, does not occur unless consequent upon the impression or modification of the faculty by the object, the mental likeness of the object is expressed by the sensitive faculty.

Note—The cognitional determinant is a real co-principle in the act of cognition.

In general that is a principle of action without which the faculty is not able to perform the action and which, moreover, exercises a real influence on the action itself.

Now, the cognitional determinant does both these things.

For, the cognitional determinant is necessary precisely because the sensitive faculty is not able of itself to issue in action; it influences the action itself because it is due to the cognitional determinant that the sensitive faculty perceives *this* or *that* object.

But it must be remarked that the cognitional determinant is not *that which* is perceived but *that through which* the sensitive faculty directly perceives the object.

ARTICLE 2. THE PRINCIPLE OF SENSITIVE COGNITION.

Thesis 7—The Elicitive Principle of Sensitive Cognition Is Not the Soul Alone, Nor the Body Alone, but the Animated Composite Consisting of Body and Soul.

Statement of the Question—1. Some have maintained that sensation is an operation of the soul alone and that the body does not actively and efficiently concur in the act of sensation, but is only a prerequisite condition, inasmuch as the modifications which the external objects produce are recognized by the soul.

According to this opinion sensation cannot be considered organic and material, but must necessarily be immaterial.

This doctrine is held by those who err about the substantial union between body and soul; Descartes, Leibnitz, Rosmini, etc.

Materialists assert that sensation consists in certain activities of the nerves and a reaction in the brain. They argue that, since the impressions received in the sense organs from without are carried to the brain by means of the afferent nerves and there produce a reaction and molecular or some other type of motion, the phenomena must consist in these motions.

All that can be inferred logically from these facts is, that such modifications and motions are conditions and concomitants of sensation.

The correct doctrine is that of the Schoolmen who hold that the body and the soul, i. e., the animated composite is the adequate elicitive principle of sensation, although the soul is the *radical* or *formal* principle.

We do not enter here into the question about the nature of the union of body and soul in man, nor do we explicitly regard how sensitive cognition takes place in the animal.

We prove our thesis from the consciousness of our actions.

Part I—The Elicitive Principle of Sensitive Cognition Is not the Soul Alone.

Proof—1. If the soul alone is the elicitive principle of sensitive cognition, it must perceive objects through impressions received by it from the body.

But this is impossible. Therefore.

*Proof of the Minor—*The body is extended; therefore it cannot act directly on the soul, which

is a simple being. For the action of a body upon another body occurs by the application of its parts to parts of the body acted upon. Therefore.

2. Sensation is attributed to the soul alone as to its adequate cause because there seems to be no proportion between sensitive operations and material forces.

But the alleged reason is invalid. Therefore.

Proof of the Minor—The reason advanced would be valid if material forces were said to be the complete and adequate cause of sensation.

However, we maintain that the material forces are only a *partial* cause which, together with the soul and in virtue of the power derived from the soul, constitute the complete and adequate principle of sensation.

Part II—Not the Body Alone.

Proof—1. The reasons advanced by Materialists prove merely that the various nerve-motions are a *condition* of sensation, but they do not prove that sensation consists in these motions.

2. If sensation consists merely in the vibratory or molecular motions of the nerves, the complex activities of animals can be explained according to mechanical laws. This, however, is absurd, as we shall prove.

3. We proved before that the vital principle is a reality. But if it is a reality it must also be a cause in the process of sensitive cognition.

Part III—But in the Living Composite.

Proof—1. Neither the soul alone nor the body alone is the adequate elicitive principle of sensitive cognition; therefore it is the animated composite being, consisting of body and soul.

2. Consciousness testifies that sensations are extended. Therefore they must be received in an extended principle.

But only the animated composite being is extended. Therefore.

Proof of the Major—1. Sensation itself is quantitative. The properties of quantity are: (a) extension; (b) intensity, that is, it can be measured; (c) protensive magnitude, that is, it can be produced gradually.

“Not only the object felt is something extended, but the very feeling is extended also. Thus, in the sensation of sight, the organ is a certain part of the body, the impression made upon the eye is extended, as experience shows, the sensation is also extended. In like manner the same can be said of the other senses.” (Driscoll, *The Soul*, p. 197.)

2. Consciousness testifies that sensation may be gradually produced, for example, from the hand to the wrist, to the arm, etc.

3. Individual experience manifests that sensations differ in intensity. We distinguish a difference in intensity between the candle and an electric light, and an attempt has been made to measure this difference. (cf. *Psycho-Physics*.)

Sensitive cognition requires not only an extended principle but also a *simple* one, which manifests all the parts of the object perceived as *one sensation*.

If this were not so, the sensitive faculty would perceive either single parts of the object, or each part of the sensitive faculty would apprehend the whole object.

If the first would occur, we would hardly ever recognize the entire object; if the second, we would apprehend one and the same object a number of times.

Cor. 1. Therefore, the body is not, in the strict sense, the instrument of the soul in so far as the latter is sensitive. For, the soul does not move the body to action, but the soul and body concur as the complete and adequate principle of operation.

Cor. 2. Therefore in the soul after its separation from the body sensitive life ceases, since the soul after its separation from the body does not retain the *formal power* of sentiency but only the *radical power*.

ARTICLE 3. THE SEAT OF EXTERNAL SENSATION.

Thesis 8—The Seat of External Sensation Is Not in the Brain but in the Various Sense Organs.

Statement of the Question—It is clear that the sensitive faculties are organic. In the present thesis we enquire into the question: Where does external sensation take place?

Descartes and his followers thought that the soul was localized in the brain and that sensation took place in the brain.

Modern physiologists hold a similar view. They contend that the external sense organs serve no other purpose than to receive impressions from without and transmit them to the brain by means of the nervous system. Consequently, the sensation of sight, hearing, etc., occurs in the brain and not in the external sense organs. "In com-

mon parlance we are said to see with the eye, hear with the ear, etc., but in reality these organs are only adapted to receive impressions which are conducted to the sensorium (or seat of sensation) through the optic and auditory nerves respectively, and there give rise to sensation." Baker, Kirke's Handbook of Physiology, p. 630.

"The sensory organs are only instruments of the mind, which has its seat in the brain. The sensation itself evidently first takes place in the brain." Bernstein, The Five Senses, p. 2.

According to the teaching of the Schoolmen, ancient and modern, external sensation takes place in the external sense organs, namely in the extremity of the nerves, the optic, the auditory, etc. This doctrine by no means denies that there is a necessary connection between the external senses and the brain. For,

(a) The external sense organs receive impressions and impulses from without and convey them to the brain.

(b) In the brain a reaction occurs. This reaction is necessary in order that sensitive cognition be elicited in the external sense-organs and be recognized by the central sense, which has its location in the brain.

(c) This reaction is transmitted to the external sense organs by the efferent nerves.

Proof—1. Consciousness bears witness that we see with the eye, hear with the ear, etc., and we have no experience whatever that these operations take place in the brain.

Now, this testimony of consciousness cannot be false. Therefore.

Proof of the Minor—This testimony of consciousness is constant, universal, and experienced in the normal condition of man.

But to say that a consciousness which is constant and universal is deceptive and false, is to say that the natural powers of man are given to deceive. But this cannot be maintained.

2. The opinion of those who claim that sensation takes place in the brain is contrary to certain well-established facts.

(a) Physiologists tell us that the brain may be cut, punctured or cauterized, without the patient, retaining normal sensibility in other parts of the body, experiencing any pain. (Farges, *L'objectivité de la perception*, p. 152.)

(b) It has been proved by surgical operations and vivisectional experiments that the cerebral lobes and even either of the cerebral hemispheres can be removed in birds and some other animals without thereby destroying sensibility. (Foster, *Textbook of Physiology*, ed. 3, p. 550.)

(c) Each sense organ is equipped with a peculiar and highly complex structure, suited for the special end of representing the object in mental likeness.

Now, such a structure would be useless and superfluous for the mere perception of external impulses and their transmission to the brain.

On the other hand, no organ adapted to external sensation is found in the brain; its structure is almost uniform throughout.

(d) To take a concrete case: if the act of vision were to take place in the brain, the terminus of the act of seeing would be in the light

entering through the eye, not in the place whence the light proceeds.

This, however, is clearly against experience.

Note—1. Although external sensation is not performed in the brain, yet its purpose is obtained with the assistance of the brain.

For, the external senses and their operations are directed to the welfare of the entire sensitive being. This welfare cannot be secured by external sensation alone. By it the sensitive being perceives, indeed, the common and proper objects of the senses, but it does not perceive them as hurtful or useful; to bring about the latter the brain is necessary.

Note—2. The manner in which the excitation of the external organs is conveyed to the brain is matter of conjecture. Some supposed it to be by way of molecular motion, others compared it to the action of electricity, others offer still different explanations.

ARTICLE 4. THE INTERNAL SENSES.

Thesis 9—The Schoolmen Commonly Admit Four Internal Senses. They Are the Common Sense, the Sensitive Memory, the Imagination, Instinct.

Statement of the Question—Opinions and doctrines differ about the question of the internal senses. Aristotle and St. Thomas held them, and they are postulated by the older as well as the more modern Schoolmen.

Opinions diverge chiefly with regard to the number of the internal senses, the nature of each, the organ, and the relation of the one to the others.

A. THE COMMON SENSE. (*Sensitive Consciousness.*)

1. *Its Existence.* 'The soul does not perform sensations by its own essence. If this were the case, the soul would constantly perceive and act in a sensitive manner, since its essence is always actual.

The postulate, therefore, is a fair one that there are internal senses besides external ones.

Now, in order to perceive both internal and external sensations as its own, to compare their objects in a concrete, sensitive way, and to recognize their material differences, is an act at least inadequately distinct from the actions of the external senses.

For, the sensation itself, as a sensitive organic act, and the difference between the various acts and their objects, is something which does not fall within the scope of the proper object of sensation, e. g., color, sound, etc., nor of the common object of sensation, such as extension, shape, etc., nor is it the object of the memory, the imagination or instinct.

On the other hand, sensation is not the object of a spiritual faculty, since sensations and their differences, both in themselves and in their objects, are sensible things, which cannot be directly attained by a spiritual faculty.

2. NATURE AND OBJECT OF THE COMMON SENSE.

The *object* of the common sense is

(a) to perceive the external and internal sensations and their objects, the former directly, the latter as already perceived by the senses;

(b) to perceive the difference between the various sensations and their objects, not of course by real reflection or judgment, but in a concrete, material manner;

(c) to perceive the sensitive organs, the body, its single parts, not directly but indirectly, yet in and with the sensations. The reason of this is because sensations are immanent actions of the animated composite; hence the common sense cannot perceive the acts of sensation without at the same time perceiving their organic principle.

From what has been said it is evident that the common sense is an *organic* faculty. For,

- (a) its formal object is something sensible;
- (b) it is also found in brutes;
- (c) its organ is material—the brain.

3. THE ORGAN OF THE COMMON SENSE.

Though the common sense, or sensitive consciousness has been demonstrated as a distinct function it would be false to argue that this sense is a single separate faculty apart from others, having a special organ.

Accordingly, some (Mercier) regard the common sense not as a distinct or special faculty, disconnected from the others, but simply as a power of associating our sensations. They consider this power not to occupy a special cerebral center but to depend on the combined action of the cerebral centers affected by the exercise of the external senses and on the conduction along the nerve-fibres that connect these various centers.

Others (Willems) explain the matter thus: the common sense is distinct from the other senses,

but not adequately—much as the whole is distinct from its parts.

For, the common sense perceives all the internal sensations as also the external ones and their objects, in order that they may be distinguished among themselves and that there may be sensitive consciousness of them.

This, however, would be impossible unless the common sense

(a) would in some way concur as a remote elective principle;

(b) would at the same time receive them into itself as their remote object.

For sensations are vital acts and as such inhere in the elicitive principle and, because they are accidents, they cannot be wrenched from it or pass over into some other vital principle.

Therefore, the common sense is the principle and remote subject of all sensations and, hence, cannot be distinguished adequately from the single senses, but as a common sensitive power embraces all of them.

Hence there is no act of sensation which is not at the same time, at least remotely, an act of the common sense.

As a consequence, its organ includes all others in itself and is the cerebro-spinal nervous system.

Similarly, those who postulate an internal sense think it to be explained as an association that grows up between the qualitatively different sensations of the various senses and a sensation of a uniform character, namely muscular sensation, which accompanies them all. This association they believe possible because the subject who ex-

periences the two sets of sensations is one and the same person. This association is only a function of the common sense and has been called *sense-consciousness*.

B. SENSE-MEMORY.

1. *Idea of Memory.* It is clear that we not only perceive, think, wish, etc., but that we are able to retain these acts and their objects in some way, so that later we may recall them and recognize them as past.

Memory, then, is the faculty by which we retain, recall and recognize past events as past events.

This distinguishing feature of memory implies particularly two elements, (a) the recognition of the event, (b) the reference of it to its place in the past.

2. *Kinds of Memory.*

(a) By reason of its origin memory is either sensitive or intellectual.

Sense-memory is found in man and brute, and its objects are the past acts of sensitive cognition and sensitive appetite and their objects.

Intellectual memory, belonging to man alone, has for its direct object the past acts of the intellect and will. But on account of the identity of the rational and sensitive soul in man, it extends also to sensitive acts, apprehended, however, in an immaterial manner.

3. *The Elements in Memory.*

It seems that we ought to distinguish three elements in memory: retention of acts of cognition and appetition; their recall; their recognition.

(a) *Retention.* It is evident that our acts and their objects in order to be an object of memory must in some manner abide in us, otherwise we would have a new cognition whenever the memory exercises itself.

The question is: How do acts remain in us, as acts or as potencies?

In answer to this question we may argue that acts cannot remain in us

Numerically as acts of the cognitive or appetitive faculty; nor do they remain in us as unconscious acts which are not noticed.

For the act of memory is not numerically the same as the past act, since it has the past act as its object of recognition. For instance, the joy I now feel is one thing and its recollection, another.

If, then, the past acts and events do not remain actually, they can remain only potentially, after the manner of a disposition or habit.

The mental likeness of the object expressed by the faculty, in some way or other, seems to remain after the acts have passed. The acts of cognition and appetition impress themselves, as it were, on the soul, leaving a sort of vestige of their passing by which they may be easily found and recognized, just as the acts of a musician effect and leave behind in the artist a disposition or habit even when he is not actually playing an instrument.

(b) *Recall.* (aa) *Manner of Recall.* The acts preserved in the memory may be reproduced in a twofold way, spontaneously and voluntarily.

Spontaneous recall occurs when, on account of some object or because of some determination of nature, the former acts revive in us.

Voluntary recall consists in this that we purposely intend to recall former acts. This voluntary recall belongs to man only, and, of itself, has its source in the rational nature of man which is gifted with the power of freedom and reflection.

Laws of Recall. The laws of recall of spontaneous as well as voluntary memory are based on the Laws of Association of Ideas. The laws of Association mean that our thoughts do not lie isolated in our minds but are connected with each other in logical sequence by a vast array of associates. The chief of these laws are:

The law of contiguity in space and time;

The law of similarity—identity, unity, affinity;

The law of contrast.

The law of contiguity formulates the truth that the mind in the presence of an object or an event, whether actual or ideal, tends to recall other objects and events formerly closely connected in space or time with that now present. The process of learning to walk, to speak or write, and the acquisition of various manual arts, rests on the tendency of actions which are repeated in succession to become so united that each recalls the other.

The law of similarity expresses the general condition that mental states recall their like in past experience. Associations by similarity are innumerable. A photograph recalls the original; a face we see, a story we read, a song we hear, re-

mind us of similar experiences of the past. Painting, sculpture, the drama and the other fine arts, seek to please by idealizing things that are similar to those perceived before. The pleasures of wit and humor, the charm of happy figurative language, the admiration won by great strokes of genius, are in the same way largely based on the satisfaction of the tendency by which the mind is impelled to pass from one thought to its like.

The law of contrast announces the fact that the mind in the presence of any mental state tends to reproduce contrasted states previously experienced. The idea of prodigal wealth recalls that of needy poverty; cold suggests heat; white, black; virtue, vice.

In addition to these primary laws there are certain other secondary laws which determine the efficacy of memory and its power of recall. They are

Vividness;

Frequency of repetition;

Recentness.

The law of vividness implies that the deeper, the more intense, the more vigorous the original impression or thought, the more permanently is it retained by the mind and the more readily recalled. That is the reason for saying, "First impressions last longest." The novelty, beauty, or overwhelming power of a single experience may give a life-long permanence.

According to the law of frequency the next idea to enter the mind, whenever there is recall of former experiences, will be the one most frequently associated with the subject one is think-

ing about. The word "cocoa," for instance, may bring before the mind not only a steaming cup and the flavor of its contents, but also a daintily clad figure in cap and apron bearing in her hand the brand of some well known cocoa manufacturer. If a typist or pianist has learned one system of fingering it is almost impossible to change, because each letter and each note is associated with the idea of movement of a particular finger.

The law of recentness signifies that the shorter the interval which has elapsed and the fewer the intervening experiences, the more easily a past thought or event is recalled. That is the reason why the reading or studying of a new subject should be repeated at brief intervals in order that it may be fixed indelibly on the mind.

(c) *Recognition.*

It is not enough for memory that our acts are in some way retained and reproduced, they must also be recognized as past. This recognition may occur in two ways:

(aa) *Directly*, when an act formerly present is now represented through the imagination, without any reflection about the identity of act and object. Thus a wolf, experiencing hunger, recalls the hare caught and devoured in such or such a place, and repairs to that place.

This direct recognition is found in sensitive memory and seems to consist in the representation of the imagination which, unlike external sensation, does not present the present object but a non-present one.

(bb) *Reflex Recognition* consists in a comparison made between the object of the present act

and of the acts of the past, and an affirmation of their identity.

It is evident that reflex recognition can belong only to rational beings. The proper object of the intellect is, of course, the universal; but, since the imagination furnishes the material for the action of the intellect, and since sense-memory always pre-supposes a single past act, intellectual memory presupposes sense-memory and has recourse to it even in the understanding of immaterial things.

4. *The Organ of Sense-Memory.*

Some (Willems) hold that the sense-memory is part of the common sense and that it is inadequately distinguished from the external and other internal senses. These claim that certain parts of the anterior brain are the organ of memory.

For the qualities of memory, cf. Dubray, *Introductory Philosophy*, pp. 85 ff.

C. THE IMAGINATION.

1. *Idea and Object of the Imagination.*

We know that we not only perceive objects but that we can, even in the absence of any actual sensation of a physical object, re-present to ourselves objects perceived at some former time and that we may form images of objects never perceived before; e. g., the image of a golden mountain, a house of crystal, etc.

The power to do this is the imagination, which may be defined as the faculty of forming representations either of qualities or of whole material objects that have been previously presented

in perception but which are now no longer actually present.

2. It seems that the organ of the imagination is the whole brain since it can image all the objects of the other senses. This seems to be confirmed also by experience. For certain activities of the imagination are hindered when certain parts of the brain are injured.

3. *Nature of the Imagination.*

The imagination is not merely a material or physical faculty in the sense of the Materialists, nor is it a spiritual faculty as the associationists Hume, Bain, Spencer, etc., would have it. The latter confound the intellect and the association of ideas with the phantasms of the imagination. It is an organic faculty, because its object is material, because it re-presents its objects in a material way, and because its organ is material.

However, the imagination is a powerful instrument of the intellect. For,

(a) Since its activity precedes that of the intellect and since it prescind from the elements of time and space, it prepares the object of the senses for intellectual abstraction.

(b) Inasmuch as the activity of the imagination follows the act of the intellect it, in a manner, clothes spiritual objects in sensible forms, so that the cognition of them may be more complete and in harmony with our intellectual and sensitive nature.

We must not conceive the images of the Imagination after the manner of physical images painted on canvas. The images of the imagina-

tion are *vital* images, which render the cognitive subject analagously similar to the object cognized.

4. *Division of the Imagination: Reproductive and Creative Imagination.*

(a) *Reproductive Imagination.* The reproductive imagination represents objects as perceived by the senses without making any change in them. This reproduction may be

(aa) *Spontaneous*, in as far as it is effected either by certain organic distrubances of the brain (as occurs in sleep and hallucination), or by the actual presence of sensations, such as sight, touch, hearing, memory, etc.

(bb) *Voluntary*, if it is brought about by the will. The latter can be effected only by man, whilst the former is found also in brutes.

The reproduction is brought about by the laws of association mentioned above in the consideration of the memory.

(b) *Creative Imagination.* The creative imagination forms images of objects not actually perceived or, in a subjective way, modifies them, fills them out and completes them. This remodeling of its own contents it may accomplish by itself, as in dreams and reveries, which are usually wanting in coherence. The fruitful use of the creative imagination, however, is generally found only when the faculty is employed in conjunction with reflection and under the direction of the higher faculty of reason. Such is the imagination of the artist in the production of his work.

We must not, however, understand the activity of the creative imagination in the sense that it

produces something entirely new. The imagination cannot re-present anything which was not at one time or other perceived by the senses; e. g., a person born blind has no image of color.

D. INSTINCT OR THE SENSE OF WHAT MAKES FOR WELL-BEING.

Perception and association do not explain the whole of sensitive life. There is a sense in animals which enables them to know what is useful or harmful to the preservation of the individual and the species. We see them pursue what is beneficial and flee from danger and pain. The Schoolmen called this the "estimative power." We might term it the sense of what makes for well-being.

As some of the actions which result from its guidance are those promoting the particular species of the animal and transcending its individual experience—such as the weaving of webs by spiders and the building of nests by birds—it is also called instinct.

There are other actions dictated by it which show an individual initiative and an adaptability that can be trained and perfected by practice.

Instinct does not seem to be the exclusive possession of brutes. There are reasons which show that we find it also in man.

(a) *From Parity.* Instinct is found in brutes and is not only necessary for sensitive life but even pre-eminent in it.

Now it might be said that man is not inferior to the brute in the more perfect senses.

Should some one say that this sense is useless to man, because he possesses the higher faculty of reason and because it is contrary to the dignity of man to be guided by blind instinct, we might reply: it is true that man should be led by reason; yet reason, which is only imperfectly developed in early life, presupposes the activity of the vegetative and sensitive life. Before a human being can provide for his needs by reason, a sense is required for the preservation and well-being of the vegetative and sensitive life. This sense must recognize what is good or harmful for the body.

(b) *From Necessity.* It is not enough that we recognize objects which are proper or common to the external senses, and that we become aware of and recall our acts and their objects by the internal senses, but we must also perceive the suitability or unsuitability of material objects in order to pursue or avoid them.

Now, the external and the other internal senses do not *formally* cover this ground. Neither does the intellect do it *directly*, since it does not directly perceive the material suitability or unsuitability of material objects.

(c) *From Experience.* It seems clear from experience that man sometimes performs actions very useful to him by mere impulse of nature, without previous intellectual cognition or experience. Thus, every one is led by nature to put forth his hands, head, or feet, in a manner suitable to avoid some threatening danger to the body, or hold fast to objects which are slipping from

his grasp, or reach out towards objects lying at a distance.

Infants, who surely do not reason, extend their limbs in a way suitable to reach objects, accept suitable food or reject that which is unsuitable, without knowing the reason for doing so.

Now, this concrete judgment regarding the suitability or unsuitableness of material objects is not the formal and proper object of the other senses. Therefore.

Still, we do admit that instinct is a power more evident in brutes than in man. This is explained by the fact that they have not reason to guide them in their actions.

Hence, too, the more reason is perfected in us, the more does instinct retire into the background and become subordinate to the intellect. Under the influence of reason it becomes highly perfected, as may be judged from the skill manifested in works of art in the execution of which bodily organs, such as touch, sight, hearing, etc., are required.

CHAPTER II

SENSITIVE APPETENCY.

1. *Division of Appetency.*

Appetency in general means a natural tendency or inclination towards a good. By a good we here understand every object which is suitable to the nature of the being attracted by it.

Every being has by its nature certain inclinations or tendencies; in fact the *nature* of a being is the being itself regarded under the particular aspect of possessing a fundamental inherent tendency towards a definite end which is its good. Hence the *good* may also be defined as the object towards which every being by its nature tends.

In sensitive and rational beings the tendency follows upon cognition.

Even plants and all inanimate nature have this tendency which impels them blindly towards that which is good and perfective of their natures.

Hence there are two classes of tendencies or appetitions:

(a) Natural tendencies which are those found in non-sentient beings, in virtue of which they are drawn towards their particular good. They are called natural because they are wrapped up with the very nature of the being.

(b) Elicited appetitions which are roused to activity by cognition. They comprise the feelings of conscious attraction towards their particular good in sentient beings.

Elicited appetite again is twofold:

Sensitive or *spontaneous* appetite, which depends on sensitive cognition; and *rational* or *volitional* appetite which depends on intellectual cognition.

2. *Definition of sensitive or spontaneous appetite.* Sensitive or spontaneous appetite is an inclination or tendency in a sentient being in virtue of which it is drawn towards some object apprehended by it as a good.

Hence the object of sensitive appetite is the *sensible good*.

3. *Difference between sensitive appetite and sensitive cognition, and between sensitive and rational appetite.*

(a) Sensitive cognition of itself and always tends towards the mental representation of the object, whereas sensitive appetite, presupposing this mental representation, strives after the possession of the object.

Sensitive cognition of itself and always *perfects* the cognitive agent; whilst sensitive appetite may often inflict injury, whenever, namely, the good towards which it inclines is only apparently good.

(b) The objects of sensitive appetite are exclusively material objects; whilst the objects of rational appetite are also spiritual things.

Of itself sensitive appetite is *not free*, but is borne with necessity towards its object, provided the latter has been sufficiently presented to it.

Rational appetite is free regarding each particular object and also exercises dominion over sensitive appetite.

4. *Feeling, Passion, Emotion.*

From the variety of terminology it is clear that the subject of feeling, passion, emotion or sentiment, is rather vague in psychology. To simplify the matter we may consider the subject under three heads: feelings, in the restricted sense, passion, emotion.

1. *Feelings.* According to the above division we restrict the term "feeling" to pleasure and pain, which are elementary processes in affective life. The term "pleasure" and the term "pain" are difficult to define. Their meaning, however, can be easily experienced. Pain applies chiefly to feelings resulting from organic conditions, for instance, a wound, a soreness, an ache. Yet some mental states due to other causes are also called painful. "Unpleasantness" is a more general term and applies to all phases of mental life. It indicates less than pain, and many states of consciousness to which we could hardly apply the term "painful" may be called unpleasant. The same distinction is also applied, though less generally, to the terms "pleasure" and "pleasantness."

Pleasure results from the healthy, vigorous, normal exercise of the various powers. Inactivity and rest, as such, are not pleasant. The most agreeable rest is a change in the nature and intensity of activity.

Pain and unpleasantness result from excessive exercise or excessive restraint. The complete inactivity of a faculty, such as the ear, eye, imagination, intellect, especially if prolonged, becomes very painful. Think of always being in complete

darkness or remaining with eyes closed, of making no motion whatever, of not thinking at all; it would be unbearable. On the other hand, excessive exercise is also painful. Too bright a light, too loud a sound, too great a muscular effort, are sources of pain.

2. *Passion.* Passion is essentially a thing of the body. It is a kind of suffering, as the word indicates—suffering in the broad sense of having something done to oneself.

The attraction of the object works on the nervous system so as to produce a kind of agitation, tension or vibration. This tension, while wearing out the tissue and exhausting strength, stirs up and lets loose a stream of energy leading to impetuous action. When the movement has expended itself, the amount of strain undergone is manifested by the relapse and physical exhaustion which follows.

Passion, then, is a distinct dominating force by itself. It arises from the particular way of viewing the object as beautiful or pleasurable, or the opposite, and a desire for beauty or pleasure, or an aversion for the contrary. It is a strong force, spontaneous and automatic, and resenting the control of reason and will. It tends towards its object by a vehement impetuosity, regardless of moral and prudential reasons. In short, passion, taken alone, is the vital function proper to the animal and represents the purely animal in human nature.

The passions in man are not of themselves evil. Each passion has its proper place and purpose. The evil comes in only when they rise to such

violence as to upset the mental balance and interfere with reason and control; or, when they are deliberately indulged in under circumstances where indulgence is out of place and morally wrong.

Emotion. Emotion is not the same as passion. We perceive this in the tender spiritual affections which one person may entertain towards another, for instance, on the ground of friendship or relationship. Here we find the passionless, calm purity of man's rational nature combined with the vibratory disturbance of sense-feeling, not however amounting to passion.

Emotion may be described as "the sympathetic vibration of the sense-faculties in response to the activities of the spiritual faculties—intellect and will—but without awakening the full power of sense." Let us use an illustration. If you strike a tuning fork it will at once give out its full sound. Bring it closer to another tuning-fork of the same pitch and the second, without being struck, will begin to vibrate slightly and thus give out the same note, though not by any means as fully as if it had been struck.

Similarly in man the sense-faculties are not only capable of working strongly when struck by their objects, but they are also capable of answering sympathetically to the strong workings of the rational faculties when these are impressed by their objects.

We may make what has been said clearer by an example, say the love of a brother for his sister. The brother will be fully conscious of the womanly beauty of his sister, but he will never dream of

contemplating her in this light. For this would naturally rouse a passionate love, out of place between members of the same family. He considers her only under the idea of a family relation or else according to the excellence of her character. The outcome is a purely spiritual love. Yet, because man is a being composed of body and soul, of spirit and sense, this spiritual love will be tinged with emotion; that is, the sense-nature will respond sympathetically to the activity of the rational faculties, thus producing the tenderness of emotional feeling. This emotional feeling will not, however, develop into passion or display that uncontrollable vehemence which is characteristic of passion. It will serve rather as an accompaniment to the rational faculties, giving a glow of warmth to what would otherwise be cold and hardly human. It relieves our purely spiritual perceptions of their inhuman coldness and thinness, makes us feel that we are body and soul together, and thus gives a sense of concrete reality to our activities. In this way emotion encourages us to proceed by assuring us of the value and efficacy of what we do.

What is true about the value of the emotions for ourselves, is likewise true of the value of the emotions in our influence over others. I am not referring to an excessive or morbid emotionalism. This, besides making other people uncomfortable, breeds disgust and deprives us of all influence. What I mean is a measure and degree of emotion which manifests strength and not weakness, which is an embellishment and not a defect. I mean that extremely delicate thing which does not seem

to carry us away but is always under full control; something which lends warmth and color to our words and actions and makes us thoroughly human.

To illustrate: Let a speaker who lacks this quality ascend the platform. No matter how fluent his speech, how perfect his delivery, the audience will feel that they are listening to an academic exercise and will remain unresponsive to what they hear. Let the same speaker try to put force into his speech by raising his voice and by more vivacious action, and his academic exercise will degenerate into a piece of rant.

But let another speaker, possessed of this quality, come before the same audience. His manner may be tame and undramatic, without much grace of gesture and delivery, yet everybody will be deeply impressed. There is a sympathetic something in his voice, something earnest in his manner, which seems to account for it all. It is something subtle which makes all feel that here is a man speaking to man, mind to mind, and heart to heart. We sometimes call it the power of oratory, sometimes the magnetism of personality. But, let the ultimate explanation be what it may, it seems to lie in the fact that the rational powers arouse in a special way that sympathetic accompaniment of sense which we call emotion and that emotion, although scarcely perceived in itself, is the medium by which the communication of personality is conveyed.

Emotions, therefore, depend on the operations of the mind, on the character of the thoughts we entertain.

Division of Emotions. No psychologist has ever attempted a complete classification of the emotions. For practical purposes we may adopt the traditional division. Emotions may be divided into—

(a) *Self-Regarding Emotions.* These emotions refer to the personal good of the individual. They are based on the innate tendency to self-preservation, self-assertion and development. Some of them refer to things that are conducive to the fundamental ends of man and are therefore objects of love; others refer to things that are antagonistic to them and are therefore objects of aversion. Some of these emotions are, self-importance (self-esteem, self-complacency, self-respect, self-reliance, pride, self-pity), love of approbation, love of activity (ambition, rivalry, emulation), fear, anger, remorse, shame, self-condemnation.

(b) *Altruistic Emotions.* Man is made to live in society. Therefore he must also have certain emotions which refer to others. Some of these emotions are sympathy, love of friendship, family affections, local, business, neighborhood interests, etc., and the opposite emotions—hard-heartedness, hatred, cruelty, scorn, etc.

(c) *Intellectual Emotions.* The basis of intellectual emotions is love of truth, knowledge. Man wants to know. Associated with this love of truth is ignorance, novelty, surprise, wonder, curiosity, investigation, pursuit, discovery, consistency, etc.

(d) *Esthetic Emotions.* These emotions are based on the fact that certain persons, things and

actions are called beautiful, pretty, graceful, sublime, melodious, witty, etc., while others are ugly, inharmonious, etc.

5. *Sensitive Appetite An Organic Faculty.*

There is no more reason for asserting that the sensitive appetite is a spiritual faculty than for saying that the cognitive faculty of sensation on which it depends is spiritual. Its seat is not in the soul by itself but in the compound of soul and body, in the animated organism.

This is clear from the close relationship which is seen to exist between the sensitive appetite and the organism. That some intimate relationship does exist between the two is evident from the physical manifestations which accompany the emotion of delight: the supply of blood becomes more copious in the brain, as a peculiar brightness of the eye indicates, respiration becomes more active, with the general result that the temperature of the body rises and the nutritive processes are quickened and furthered. Grief and sadness have effects that are almost opposite: the circulation appears impeded, respiration slackens and is fitful, nutrition in general is retarded, a lack of appetite, indigestion, etc., supervene.

These are only two examples, but they are sufficient to indicate that the sensitive emotions are indeed modifications of the organism.

Organ of Sensitive Appetency—Not the Heart.

It is a well attested fact that there is a close connection between the heart and the emotions. The effect of sorrowful emotions is a slackening

of the beatings of the heart, which is betrayed by a blanching of the cheeks and a general depression of the whole organism. Joy and hope have just the opposite effects: the pulsations are quickened, the blood flows more abundantly to all the organs and gives the feeling of contentment and vitality. These common experiences are recorded in all the languages by the use of such stock expression as "to have a heavy heart," "to have a broken heart," "to be light-hearted."

The question, is whether we are right in concluding that the heart is the seat, or organ, of the emotions and affective sensibility. The philosophers of old considered that it was, as indeed the uneducated today still consider it to be. But scientifically speaking, it is not so. The heart is nothing more than a muscle and has nothing in common with either sensation or the affective states dependent upon it. The real organ of the sensitive appetite is the nerve-centers, which are the physiological basis of all psychical life in man.

The popular error which refers the emotions to the heart, is easily explained by the corresponding changes in the heart's action which accompany these states of feeling. Roughly, the physiological explanation is that the heart comes under the control of the nerve-centers through two groups of nerve-fibres that belong respectively to the pneumogastric nerve and the sympathetic nerve. Any excitation of the former slackens the movement of the heart, whilst any excitation of the latter accelerates it.

Hence it is clear why the emotions, which act directly upon the nerve-centers, come to have a

reacting influence upon the motions of the heart, and why, conversely, modifications in the contraction of the heart, by varying the supply of blood to the brain, have an effect upon the psychic activity of the person.

6. *Spontaneous Movement.* Spontaneous movement results from an act of sensitive appetite, and is therefore dependent upon previous perception. That spontaneous movements take place in both man and animals is clear from experience.

In his analysis of spontaneous movement St. Thomas assigns three kinds of causes. The muscles put into action by the nerves are the immediate efficient cause exciting the movement. The determining cause consists in the desires urging the sentient being, sensuous appetitions that determine the act and regulate the locomotive power appropriate to it. And the third is the directing cause, which is some act of sensuous cognition—more often than not of the instinctive faculty that estimates the worth of an object; this cognition awakens and directs conation, which immediately provokes the movement.

Although the external or internal stimulus is not the sole or adequate cause of spontaneous movement, its influence is nevertheless a real one in so far as it is necessary to bring the cognitive powers into operation. What is not infrequently spoken of as the environment of the animal is, then, a remote cause, a stimulus, of the spontaneous movement.

ARTICLE 5. COMPARATIVE OR ANIMAL
PSYCHOLOGY.

The Difficulty Involved in This Matter. Comparative or animal psychology investigates the nature of the mind by comparing its manifestations in man and the various species of animals. There is a difficulty in this which can hardly be bridged over. "Careful reflection must convince us," writes Father Maher, "that no matter what pains and industry be devoted to the observation of the lower animals, our assurance regarding the genuine character of their subjective states can never be more than a remote conjectural opinion." (Psychology, ed. 6, p. 580.)

Our arguments, then, are arguments from analogy. And when we consider the strictly scientific evidence, we must admit "that the grounds for the analogical inference to the character of the intellectual and emotional states of the monkey, the dog, or the elephant, are very slender indeed, whilst our conjectures as to the quality of the mental activity of the insects are utterly worthless." (Maher.)

Father Wasmann, S. J., writes regarding the same subject: "The key to a scientific enquiry into the nature of the animal soul is evidently the soul of man. For we have no immediate insight into the psychic acts of the animal; we can only infer their existence and nature from the exterior actions which our senses perceive. We must compare the manifestations of our own psychic life, the interior causes of which are known to us from our inner consciousness. Consequently, scientific philosophy applies the same key as

pseudo-psychology, but it follows critical methods. It does not forget, as the other does, the fundamental law of a rational explanation of nature which runs thus: we must explain phenomena in the simplest way possible, and we are not allowed to attribute to animals higher psychic faculties than are requisite for the explanation of definite and well-observed facts." (Instinct and Intelligence, ed. 2, p. 6.)

Thesis 10—All Animals Possess Some Power of External Sensation. Those of the Higher Type Seem to Manifest by Their Actions That They Also Possess Internal Senses.

Statement of the Question. 1. Sensation is the power of perceiving concrete, material objects and of striving after them when perceived. The sensitive faculties, as we have stated, are two-fold: cognitive and appetitive.

(a) Sensitive cognition is a vital reaction by which the sentient faculty in response to an impression from a particular material object produces within itself a mental likeness of that object.

(b) Sensitive appetite is the faculty by which the sentient being prosecutes the good or avoids the evil as apprehended by the senses.

2. Animals may here be described as those beings which possess organs similar to those of man, by which they exercise sensitive life.

Animals of the lower type are those whose organism, on account of its microscopic character, and whose mode of operation on account of its

simplicity, does not manifest either a central organ or operations which can be performed only by the internal senses.

When, therefore, we claim external sensation for all animals, we do not claim it for all to the same extent. It is only of the higher animals that we maintain that by their actions they manifest external as well as internal senses. Some lower types have only the sense of touch and probably that of taste. Yet, it seems, that even some of the lower types reveal certain sensibility to light and sound, which is sometimes called dermatoptic sensibility.

3. The internal senses are those mentioned and explained before, namely, the common sense, the imagination, the sense-memory, and instinct.

4. Descartes maintained, and some maintain today, that animals are mere automata or marvelously constructed machines, whose activities are controlled by mechanical laws.

Part I—All Animals Possess Some Power or External Sensation.

Proof—From Analogy. Animals possess organs similar in structure to those of man and naturally adapted for sensation.

But beings which possess such organs also possess the power of using them. Therefore.

The Major is evident from common and scientific experience.

Proof of the Minor—Nothing occurs in nature without a cause or purpose.

Now, these organs would be for no purpose, if animals had not the power to use them.

Part II—Animals of the Higher Type Possess Internal Senses.

Proof—1. The Common Sense. The common sense is an internal organic faculty which makes us aware of the acts of the internal and external senses and of the difference between them, although it does not formally recognize them as different.

But animals of the higher type seem to possess this faculty. Therefore.

Proof of the Minor—(a) We see higher animals prick their ears, in order to hear better, move their noses closer to an object, the more readily to perceive their odor, extend their tongues to taste the object.

Therefore, they are aware that they perceive these objects by their sense-organs.

But they cannot be aware of this by any external sense.

For external senses cannot perceive their own particular acts. The eye does not perceive the act of vision, nor the ear the act of hearing, etc. That would imply real reflection, which is impossible for a material faculty.

(b) Animals reach out for food which they see and smell, not because it is agreeable to sight or smell, but because it is good for the taste. Others flee from the stick, not because it is repulsive, but because it inflicts pain.

Therefore, animals can collect the various qualities of objects they perceive by the several senses into one and can refer these qualities to one and the same object.

But this they cannot, evidently, do by any or all of the external senses.

2. *Sense-Memory.* Sense-memory is an internal organic faculty by which we retain, recall and recognize as past the various past events.

But the animals of the higher type manifest by their actions that they have this faculty. Therefore.

Proof of the Minor—Swallows and other birds will return after a year's absence to the nest of the previous year. Dogs after long absence will remember their masters. Animals will avoid what caused them pain on some former occasion or seek again what caused them pleasure.

Now, these impressions did not remain in the external senses.

3. *Sensitive Imagination.* Sensitive imagination is an internal organic faculty which forms re-presentations or images either of qualities or of whole material things that have been previously presented in perception but which are now no longer actually present.

But animals of the higher type manifest by their actions that they have such a faculty. Therefore.

Proof of the Minor—Animals, such as dogs, bark in their sleep. But this is a sign of dreaming.

Now, dreaming cannot take place without sensitive imagination.

Beasts of prey hunt animals which they never saw before or in places entirely unknown to them.

Therefore, they have cognition of objects which is neither the result of any external sense nor can

be attributed to the memory, properly so-called. Therefore.

4. *Instinct.* Instinct is an internal organic faculty which enables the animal to know what is useful or harmful to the preservation of the individual and the species.

Now, animals of the higher type manifest by their actions that they have this faculty. Therefore.

Proof of the Minor—The lamb flees from the wolf, not because its shape or color is disagreeable to the external senses, but because it knows the wolf to be its natural foe.

Birds collect twigs not because they are attractive to see, but because they are useful for the building of nests.

Animals when sick avoid food they relished before and seek medicinal nourishment.

But animals cannot obtain knowledge of what is useful or harmful to them through the external senses. Therefore.

Note—Sensuous Pleasure. Sensuous pleasure is the satisfaction or repose which the faculty of the sentient being experiences in the enjoyment of the proper objects of the sensitive faculties.

In proportion as the energy of the faculty is greater and the object more suited to call forth and satisfy the energy, so much the more intense is the pleasure. (cf. Maher, c. XI; pp. 139 ff.)

Thesis 11—Although Animals of the Higher Type Possess Instinct, They do not Possess Intelligence.

Statement of the Question—1. *Opinions.* (a) Everyone knows that there are many people of all classes who attribute intelligence to the animal. In many cases, this is the result of a sentimental feeling which is apt to recognize in the actions of a pet cat or dog activities which are performed only by a being endowed with intellect. The mistake which is commonly made is this, that man transfers his thoughts to the brain of the animal and then innocently draws out from it his own ideas and believes them to be the natural activity of the brute.

This popular error is frequently abetted by the publications of pseudo-psychologists who, like Buechner, Brehm, and others, explain the *adaptive activity* which proceeds from sensitive knowledge of the animal by the latter's "own understanding."

(b) There is a second class of men who lay claim to scientific scholarship and exactness, and yet err in the same matter. These men put the double question:

(aa) is human intelligence *essentially* different from that of the animal, or different only in *degree*?

(bb) is it possible or not that the human mind can have developed from the animal faculty of sensations?

Consequently, they admit that some kind of intelligence exists in the brute. We are not sur-

prised, then, to read in Darwin's *Descent of Man* (ed. 1871, p. 46) that he attributed to the brute "some power of intelligence."

These modern psychologists take intelligence to mean an association of sensuous representations, which is brought about by individual experience, whilst they call those actions instinctive which do not depend on experience.

(c) The third class of opponents to our theory are the *associationists*. They reduce all man's intellectual operations to *associations of phantasms*, or, to be more exact, to *association of elementary sensations* which we acquire by the external senses. If this doctrine were true, there would be no reason to deny intellectual life in the animal. For there are clearly manifold processes of association of phantasms in the animal.

This theory of sensism is almost universally admitted by modern psychologists.

(d) There is further the mechanistic hypothesis, according to which instincts are derived from acts that in the first instance, as performed by the first individuals, were intelligent; by frequent repetition they became automatic, were transmitted by heredity and thus in the course of time became mechanical; at bottom they are materialized intelligence.

2. *The Terms.* (a) *Instinct.* Instinctive actions are those which spring from *impulses of the sensitive appetite and sensitive feelings*. These actions are in themselves *unconsciously adaptive*. Hence, they are neither mere automatic actions nor intellectual functions.

Automatic actions are those which have their origin in some *internal stimulation* of the organ, such as the beating of the heart.

Reflex movement is one that is made in response to peripheral stimulation, without the intervention of any conscious effort.

In instinctive actions sensation participates as a *cause* in producing the corresponding activity. Hence, a *psychic* element must form part of the definition of instinct.

This psychic element is the one which forms the distinction between instinctive actions and intellectual ones, and consists in the *unconscious adaptive connection* of certain sensitive affections with their corresponding activities; e. g., the weaving of webs by spiders.

We may, therefore, define instinct as *a sensitive impulse of the sensitive appetite which induces the being to perform certain actions, the suitability of which transcends the knowledge of the agent which performs them.*

Accordingly instinct presupposes two things:

- (a) sensitive appetite;
- (b) sensitive cognition.

Criteria of instinctive actions:

(a) The *essential* criterion is the circumstance that the *suitableness* of the action is beyond the perception of the agent.

(b) *Non-essential criteria* are the following:

(aa) the complete perfection with which many instinctive actions are performed without any previous experience;

(bb) the constant uniformity with which they are performed by almost every individual of the same species.

There are, however, a few hereditary instincts which require previous practice and individual experience for their complete development; e. g., the play habit of kittens seems to lead to the catching of mice.

Again, instinctive actions may be divided into

(a) those which immediately spring from inherited dispositions of the sensitive powers of cognition and appetition;

(b) those which proceed from the same powers through the medium of sense-experience.

From what has been said we may also define instinct as *the suitable hereditary disposition of the powers of sensitive cognition and appetition in the animal.* (Wasmann.)

Note—Cardinal Mercier defines instinct thus: Instinct is an impulse in an animal, prior to its individual experience, determining it to perform certain uniform external actions that are so co-ordinated as to further its own welfare and that of the species. (A Manual of Modern Scholastic Philosophy, v. 1, p. 215.)

(b) *Intelligence.* Intelligence means essentially the power of *abstraction* and of *forming universal concepts*. It includes, moreover, a deliberative power which recognizes the relations between means and end, between an agent and its actions. It implies as a consequence the power of self-consciousness.

Proof—1. Animals do not possess higher faculties than their actions warrant.

But the actions of animals do not warrant the assumption of intelligence. Therefore.

Proof of the Minor—Beings that have intelligence (a) make real progress in their thoughts by arbitrary signs of language, (b) make progress in their actions, (c) understand the relation of cause and effect, means and end.

But animals do not perform any of these actions. Therefore.

Proof of the Minor—(a) Speech may be taken broadly and strictly.

1. In the strict sense, speech is the faculty of manifesting ideas and judgments of the mind by words or articulated sounds, which are employed by the convention of man as signs of judgments and ideas. This is called oral speech. We do not argue from this idea of speech, since there are other ways of externalizing ideas and judgments, as is the case with deaf mutes.

2. In the broader sense, speech is the power of manifesting ideas and judgments of the mind by sensible and arbitrary signs. To effect this three things are required:

(a) a faculty for making sensible signs;

(b) the sign must be arbitrary or conventional;

(c) the sign must reveal, not pleasing affections and feelings, nor any kind of cognition whatever, but intellectual cognitions—ideas, judgments and their objects. This is called conceptual speech.

Speech in some form is a necessary complement of rational nature.

Therefore, if animals possess intelligence, they must either have real speech or the power to acquire it.

But they have neither the one nor the other. Therefore.

The Major—1. It is evident from the most universal inference that, wherever we find sensitive beings which are at the same time rational, there too we find real speech. Even the Terra del Fuegians, the most uncultured people, have a language by which they express the highest mysteries of religion.

2. Deaf-mutes and other defectives, despite the great difficulty experienced, show an insuperable desire to reveal their ideas to others by arbitrary signs, and they acquire a ready use of those signs.

3. Man is by nature a social being. However, a society of rational beings is impossible without speech of some sort.

Proof of the Minor—To constitute speech, arbitrary signs are necessary, by which are expressed ideas and judgments and their objects.

Animals have no such signs and cannot acquire them.

For, if left to themselves, they have only natural signs by which they manifest grateful or unpleasant feelings.

By the aid of man they may, indeed, learn some articulated words and other signs, but they prove by their actions that they do not understand them.

They acquire them only by the laws of association.

Proof of (b)—Real progress implies the power of reflecting upon oneself and one's actions, in order to recognize their purpose, amend defects, and discover new truths by a process of reasoning. It is obvious that animals do not make progress in this manner. There is almost complete uniformity of action throughout.

Note—The exact nature of instinct will probably remain an enigma for ever. Cardinal Mercier offers this tentative explanation: "We may take it as certain, on the one hand, that the working of instinct is neither blind nor automatic; and, on the other hand, that an animal is incapable either of conceiving or willing the abstract good. The question to be answered is, then; What kind of intention dominates the animal in these instinctive actions? It seems scarcely probable that animals can imagine the remote end for which they work—that the young squirrel should have a prevision of the coming winter with its hardships. What we think happens is that the animal has an imagination of the acts which have to be performed *hic et nunc* and this imagination directs its work each moment during the performance of it. It has been observed that whilst an animal has not the ability to improve something already achieved, it certainly may repair an injury that its work may suffer during the process of its achievement; thus it would seem that it is conscious of its acts whilst it is doing them. If it be asked what produces these images that control its present action, we

should reply that the cause is partly objective and partly subjective; a present external perception or a present internal sensation is an exciting cause of the imagination, whilst there is also some subjective natural disposition, peculiar to the particular animal type, co-operating towards the effect." (A Manual of Modern Scholastic Philosophy, v. 1, p. 216.)

Thesis 12—There Is in Animals One Vital Principle From Which Proceed Vegetative and Sensitive Life. This Vital Principle Cannot Exist by Itself.

Statement of the Question—That life necessitates some substantial principle from which it proceeds, has already been shown.

The question now is: Are there in brutes two vital principles, the one vegetative, the other sensitive, really distinct, or do vegetative and sensitive operations in animals flow from one and the same vital principle?

To this question we give the answer in the first part of the thesis. We grant, of course, that the proximate principles and organs of vegetative life are distinct from those of the sensitive life.

In the second part of the thesis we claim that the vital principle in animals cannot exist by itself, but only as an essential part of the living compound.

Part I—There Is Only One Vital Principle in Animals.

Proof—In a being which constitutes one living compound there is only one vital principle.

But the animal is one living compound, which performs both vegetative and sensitive actions. Therefore.

The Major—That makes a being one and identical which, in the physical order, puts it into a certain distinct class.

But a being is put into the class of living beings by the principle which gives it life.

Proof of the Minor—(a) Vegetative life always ceases in an organism which has become incapable of sensitive life, and conversely.

This, however, would not be the case if the animal were not one and identical, but made up of two distinct principles.

(b) This identity of principle with regard to the two kinds of life is confirmed by the admirable *harmony*, existing between the vegetative and sensitive activities. This harmony makes of them one acting being, one organic whole, though the parts are varied, and explains the remarkable correspondence between the two kinds of operations and the reciprocal influence they exert upon one another.

Part II—The Vital Principle in Animals Cannot Exist by Itself.

Proof—The nature of a being is manifested by its actions.

But the actions of the vital principle in animals is intrinsically dependent on material organs. Therefore.

Proof of the Minor—All the actions exhibited by the animal are of the vegetative and sensitive order. Now, these actions are, as we know, intrinsically dependent on a material organ.

Consequently, the principle from which they proceed is also intrinsically dependent on matter, and hence cannot exist apart from matter.

PART III

RATIONAL LIFE

Introduction—The subject-matter of rational psychology is the human soul, its faculties, its nature, its origin, its relation to the body.

Since we have already investigated into vegetative and sensitive life, we shall here confine ourselves to the consideration of those vital acts which are peculiar to man.

In our enquiry we fall back upon the data of our consciousness and that of other men, expressed in their lives, their customs and language. From these data we reason back to the nature of the vital acts of thought and volition and to the nature of the last principle from which they proceed. (cf. Maher, Psychology, chapters I, II.)

THE RATIONAL FACULTIES IN MAN.

According to the more commonly accepted opinion among the Schoolmen the essence of the soul does not operate immediately by itself but through its faculties. Consequently, the activities of rational life have not the essence of the soul for their *immediate* and *proximate* principle, but the faculties which are distinct from the essence.

The soul, however, is the *ultimate* and *remote* principle of all vital activity in man.

Faculty in general signifies a natural ability to perform some kind of activity. A *rational* faculty means the mind's ability to undergo a particular kind of activity.

"A mental faculty or power," writes Father Maher, "is not of the nature of a particular part of the soul, or of a member different from it as a limb is distinct from the rest of the body. It is not an independent reality, a separate agent, which originates conscious states, out of itself and apart from the mind. But neither is it a mere group of conscious states of a particular kind. It is simply a special *mode* through which the mind acts."

"It is admitted by all that a faculty is not a force distinct from and independent of the essence of the soul, but it is the soul itself, which operates in and through the faculty." (Gutberlet, *Die Psychologie*, p. 4.)

Hence, the proposition, "our soul possesses different faculties," means nothing else than that "our soul is a substance which as active principle is capable of exerting different species of energies."

"That we are justified in attributing to the soul faculties in this sense is abundantly clear. Careful use of the power of introspection reveals to us a number of modes of psychical energy, radically distinct from each other and incapable of further analysis. To see, to hear, to remember, to desire, are essentially different kinds of consciousness, though all proceed from the same source. Sometimes one is in action, sometimes another, but no one of them ever exhausts the total energy of the mind. They are partial utterances of the same indivisible subject. But this is equivalent to the establishment of certain distinct aptitudes of the mind." (Maher.)

Distinction of Mental Faculties. The ground for the division of mental faculties lies in the special nature of the psychical activities and their objects. Hence the faculties of the soul, according to the Schoolmen, are distinguished by the nature of each faculty and the object towards which it is directed.

As each faculty or power of the soul has been given for the accomplishment of a special order of actions, it must naturally incline to perform these actions. Hence, the faculties of the soul are, by their nature, inclined towards their proper actions. This natural inclination of the faculty does not refer to this or that individual action, but to the entire species of actions which the faculty can produce.

It is, moreover, matter of experience that the peculiar intensity in the application of one faculty impairs the exercise of the other faculties. For instance, a person who exercises the imagination to excess will do injury to his keenness and power of judgment.

This is due to the fact that the activity of the different faculties is a participation of the activity of the soul. But since the soul is one and indivisible and of limited power, the concentration of its activity with peculiar intensity on one faculty must be prejudicial to the other faculties.

CONSCIOUSNESS.

The question about consciousness is a very important one in rational psychology. It is the chief source from which we draw the arguments for the character of our internal activity. Moreover,

modern psychologists, almost to a man, err on this point. Since they are Materialists they must endeavor to explain this mental phenomenon in harmony with their materialistic views.

Self-consciousness may be defined as the knowledge the mind has of its acts as its own.

When roused to action, the intellect not only apprehends the thing as it is, but at the same time becomes aware of its own act of cognition and of itself as the eliciting agent of the act.

This self-consciousness may be more or less explicit. It may be a mere spontaneous concomitant of the act by which the external object is apprehended, or it may be a deliberately reflex operation in which the cognitive power is directed rather upon itself and its own action than upon the external object with which it is engaged. In the former case it is called *direct* or *concomitant* consciousness, in the latter, it is called *reflex consciousness*.

That the mind in most of its operations is concomitantly conscious of its actions and of itself, is matter of ordinary experience.

In the normal operations of the intellect—perceptions, judgments, reasoning, attention, etc.—independently of any reflexive effort, the mind is usually conscious of itself and its actions.

But it is in the deliberately reflex act of consciousness that itself and its operations, and the distinction between itself and the operations, are most distinctly apprehended by the mind.

Whilst I am thinking I am spontaneously and without effort of deliberate introspection aware of the fact that I am thinking about something,

but I do not attend to the course of my thoughts, nor do I explicitly distinguish between my thoughts and my thinking self.

By an effort of attention, however, I can closely watch the progress of my thinking and notice with what clearness I apprehend the question before me, what is the relative force of the reasons, etc. In this case I clearly distinguish between the progress of my thought and the thinking mind. The former is seen to be a series of passing acts, the latter, an abiding principle of action.

In this reflex act, therefore,

(a) the distinction between the permanent mind thinking and its transient states is vividly brought home to us;

(b) we have as full certainty of the existence of this permanent mind as of the transient states;

(c) we clearly apprehend the identity between the mind reflecting and the mind reflected upon.

From this it follows that a power, which can set itself and its own present states before itself as an immediate object of cognition, cannot be an organic power. For, an organic power is one into which matter enters as an essential element, i. e., it is a compound of matter and soul that perceives, feels, hears, etc. But no material faculty can *double back upon itself*, or reflect upon itself and its own actions; for instance, the eye cannot see its own vision nor itself, the tip of the finger cannot touch itself and its own sensation of touch, etc.

Only a *simple energy*, which exists by itself and acts by itself, independently of matter, can thus apprehend itself and its action.

This wonderful power of self-consciousness is, as we shall see, an evident proof of the spirituality of the human soul.

OBJECTS DIRECTLY APPREHENDED BY SELF-CONSCIOUSNESS.

1. The objects of self-consciousness are only the *acts* of the soul, not their inner essence or nature. The latter are known to us only through a more or less elaborate process of reasoning.

2. The primary object of self-consciousness is the intellectual act and, consequently, the intellectual agent. But, as this simple rational agent is also endowed with other powers, which are simultaneously occupied with the same object as the intellect, its consciousness of itself makes it also aware of the various cognitive and appetitive operations, and of the individual notes of the object, whose quiddity alone is directly apprehended by the intellect.

3. Self-consciousness, therefore, apprehends the *ego*, the *complete human person*, as a compound of body and soul, with various cognitive and appetitive powers, some of which are rational and spiritual, whilst others are sensuous and organic.

CHAPTER I

THE HUMAN INTELLECT

ARTICLE 1. THE OBJECT AND NATURE OF THE HUMAN INTELLECT.

Thesis 1—Experience Testifies That We Have Universal Ideas, Which Cannot Be Reduced to Sensation As Their Constitutive Elements.

Statement of the Question—1. By intellectual cognitions we understand the threefold operations of the mind which result in ideas, judgments and reasoning.

The present thesis concerns itself with universal ideas.

The question proposed is one of the most fundamental in psychology, especially in our day when, in consequence of the rise of experimental psychology, the cognitive life of man is made the object of keen discussion.

We shall have recourse in our arguments to the testimony of consciousness.

2. We do not consider the intellectual acts here discussed from the standpoint of the act itself, but only from the standpoint of the object they express.

Besides, we must not confound this question with the question about "imageless thoughts" or "thinking without words." We readily admit that, since man in the present life is dependent in his intellectual operations on external and internal sensations, he also depends in the use of ideas

on the concomitant phantasms or images, at least at least the images of words.

Consequently, our opponents do not make a point against us when they appeal to experience which tells us that when we think we always experience the presence of images, at least the images of words.

3. *Concomitant Phantasms or Images.* There is a great variety of the images that are wont to accompany our thoughts. These concomitant phantasms differ: (a) according to the diversity of the objects of our thoughts, (b) according to the difference of condition and disposition of the persons, (c) according to the difference in the exercise of the faculties.

(a) When we think of material things which are not present to the senses, the images of them, or of similar things, revive in the imagination. Thus when we think of an animal, even in a general way, we are wont to have a phantasm of some animal perceived before.

If we direct our attention to these images, we observe the following characteristics: (a) the phantasms are particular, exhibiting a specific figure, shape, color, etc.; (b) they are mostly fragmentary, as becomes clear when one tries to delineate the concomitant images in the proposition "the horse is an animal"; (c) they are so volatile that it is difficult to indicate the fragments of the image which here and now accompanies the concept.

When we think about immaterial things, for instance, about a problem in mathematics, about deductive or inductive reasoning, similitudes taken

from material objects are usually evoked together with the ideas of these immaterial things.

Such similitudes are not infrequently expressed in the words by which we express immaterial things. This seems evident when we fix the attention of the mind directly on the metaphors which are used to explain technical terms; e. g., "to extract roots," "to grasp things mentally," "to measure moral actions by a standard," "to indicate the sources of wrong-doing."

These symbolic images are altogether particular, fragmentary and fluctuating.

In most cases, too, the attention of the mind is directed not to these symbolic phantasms primarily but to the immaterial object.

(b) The concomitant phantasms also differ according to the disposition and condition of the person. There are scarcely two persons, who, when thinking of the same thing, have exactly the same concomitant images.

There are some persons who hardly ever imagine anything except inasmuch as it is subject to the perception of sight (the visual type); others imagine things as they are subject to hearing (the auditory type); others, as things are subject to the sense of touch (the kinaesthetic type); whilst others in various ways internally see, hear and feel things (the mixed type).

Even in one and the same person there may be a variety of concomitant phantasms, according to the conditions in which he is, the degree of fatigue or alertness, and above all according to the intensity and attention with which a person thinks.

When one has acquired the habit of intellectual thought, the concomitant phantasms gradually disappear and finally the images of words alone remain.

There are, besides, many words which do not suggest metaphors, such as conjunctive particles, grammatical terminations by which we decline nouns and conjugate verbs.

4. *The Opponents of the Thesis.* There are many modern philosophers and not a few of the elaborators of experimental psychology who hold views contrary to ours. We merely mention some of them: J. Locke, David Hume, David Hartley, James Mill, J. Stuart Mill, A. Bain, H. Taine, T. Ribot, J. F. Herbart, H. Ebbinghaus, G. T. Ziehen, W. Wundt, W. James, E. B. Titchener.

Their General Doctrine. All agree in this that they deny an essential distinction between intellectual and and sense cognition, and that they claim sensation to be a constitutive element in all human cognition. This main idea is mixed up with others and hence the theory goes by different names.

It is called *sensism* because its advocates allow no other source of human cognition except that which is derived from sense-experience.

It is called *associationism*, or, *the psychology of association*, because its followers explain the origin of intellectual cognition solely by association of elementary sense-perceptions. According to these psychologists *ideas* arise from the *simultaneous association* or *fusion* of *sensations*, whilst *judgments* are derived from *successive association* of *sensations*.

It is sometimes called *the mind-stuff theory*, because its adherents combine the teaching of atomistic psychology with the doctrine of idealism. They contend that the elementary sensations, from the union of which our intellectual perception arises, constitute that which appears to be matter. (cf. James, *Principles of Psychology*, v. I, pp. 145-182.)

It is called *the theory of mental evolution*, because according to it intellectual cognitions, both in the individual as also in successive species, are evolved from simple sensations, and then by constant evolution those things which could hardly be understood from internal experience only are rendered much clearer. (cf. Titchener, *Experimental Psychology*, v. I, pp. 128 ff, James, l. c.)

Part I—The Existence of Universal Ideas, Inasmuch As They Are Internal Facts.

Note—A universal idea, in the sense of the Schoolmen, is an act of the mind which exhibits some note or notes that can be predicated about many univocally and separately. We have such universal ideas whenever we think of the meaning of common nouns.

Proof—According to the testimony of experience we use many common nouns and understand what is signified by them.

But this fact proves that we have universal ideas. Therefore.

The Major—There are many common nouns in all languages, as we may see by looking into any dictionary. We know, moreover, that we experi-

ence something altogether different when we understand what the common nouns mean, and something different when we do not understand them, as happens when we hear words in a foreign language of which we are ignorant.

Proof of the Minor—A common noun, such as “man,” does not signify a particular individual, nor many individuals taken simultaneously, but something which is common to many individuals and can be predicated of them univocally and separately.

But this means that we have universal ideas in the sense of the Schoolmen.

Part II—Universal Ideas Cannot Be Reduced to Sensations As to Their Constitutive Elements.

Proof—A universal idea manifests what is signified by the common noun, namely, the note or notes common to many individuals.

But no phantasm, and in particular no phantasm of words, manifests what is signified by the common noun. Therefore.

Proof of the Minor—1. Every phantasm represents particular sensible qualities of a particular individual, so much so that the phantasm of “man” might apply to a white man but not to a negro, to a small man and not to a tall man.

Besides, these phantasms, on the part of the object, are fragmentary and variable.

Now, what is signified by a common noun, for instance that of “man,” is not the particular qualities of a particular man, nor is it something fragmentary of a man, but it is the note or notes which are common to every man.

2. The phantasm of a word represents particular sounds of articulated speech, or particular characters in writing, or other particular conventional signs.

But the meaning of a common noun is something quite distinct from the written word itself, or its phantasm; for it represents a note or notes common to all.

Cor. If Sensism or Associationism were admitted, there would be no possibility of science. Science treats of the universal. It enquires into that which is common to all individuals of the same class or species. It reduces carefully observed facts to universal laws. All this, however, cannot be accomplished by the senses.

Moreover, the basis of all science are necessary and immutable truths. The phantasms, however, as we know from experience, are variable and fluctuating.

Thesis 2—We Know From Experience That We Have Ideas of Immaterial Things. These Ideas Differ Essentially From Images of the Imagination and Cannot Be Reduced to Them As Their Constitutive Elements.

*Statement of the Question—*1. Ideas of immaterial things are of two kinds:

(a) the first kind represents things which are in their very nature and positively immaterial, such as the idea of the human soul;

(b) the second class represents some note which abstracts from the material, that is, which neither includes nor excludes the material, and

hence can be applied to material and immaterial things, such as the idea of "being." They are abstract ideas.

Since we are to prove the spirituality of the human soul later, we may confine our question to ideas of the second class.

2. *Symbolic Images.* Among the images which may accompany our ideas of immaterial things are "symbolic" images. Symbolic images are those phantasms of material things which have a likeness, though an imperfect one, to immaterial things; for instance, when I think of the courage of a soldier I may at the same time have before me the image of a lion at bay.

Part I—We Know From Experience That We Have Ideas of Immaterial Things—Abstract Ideas.

Proof—We know from experience that we have knowledge of that which is expressed by abstract and technical terms, such as, obligation, possibility, necessity, virtue, etc.

But, if this is the case, we have ideas of immaterial things, in the sense explained above.

The Major—We know from experience that in our intercourse with men we use abstract and technical terms to disclose the ideas of the mind. We know, too, that our experience is different when we know what these terms mean and when we do not understand them.

Proof of the Minor—What is signified by such terms is not something sensible, but something far removed from the senses, something which abstracts and prescind from the material.

Part II—Abstract Ideas, Or, Ideas of Immaterial Things, Essentially Differ From Phantasms and Cannot Be Reduced to Them.

Proof—Ideas of immaterial things express something far removed from the senses, as just proved.

But phantasms cannot express or represent such things. Therefore.

Proof of the Minor—Phantasms, or images of the imagination, arise from associations of sensations which were had before and cannot exhibit other than material qualities.

But the immaterial or abstract ideas we are speaking of do not act upon the senses and do not contain material qualities.

Note—That abstract ideas or ideas of immaterial things are not symbolic phantasms is clear from the fact that it is something different to know what is meant by, say, bravery, and the representation of a lion at bay.

Cor. The Essential Difference Between Ideas and Sense-Perception.

If we consider ideas and sense-perceptions in relation to their *object*, we find the following differences:

(a) the objects of sense-perception are material things only; they are individual; they are perceived according to their sensible qualities.

(b) The object of ideas are not only material things but immaterial things also; they are not only individual things, but also the universal. Even in case of material things, ideas grasp their essence, a thing the senses cannot do.

Thesis 3—The Material Object of the Intellect Is Every Being. The Formal Object Is the Essence Or Inner Reason of Things. In Man's Present State, However, It is, Directly, the Essence of Sensible Things.

Statement of the Question—1. The material object is the thing as it actually is, anything whatsoever of which the mind can obtain knowledge.

The *formal* object is that by which the material object is attained by the faculty. It is that particular phase in the object towards which the faculty naturally tends.

Owing to the great diversity of the objects that can be thought of by the mind, the formal object is of two kinds:

(a) the *proper* formal object—the immediate, direct, proportionate object—is that which falls directly within the range of the faculty and for the knowledge of which the faculty is by its nature adapted;

(b) the *improper*—the indirect, mediate, secondary object—is whatever the cognitive faculty cannot know except by the aid of knowledge it has of its proper object. The chief indirect object of the intellect is all spiritual beings.

2. There are three parts in the thesis:

(a) In the first part we assert that the *material* object of the intellect is every being, so that there is nothing that exists, whether actual or possible, necessary or contingent, substantial or accidental, material or spiritual, of which the human intellect cannot have some knowledge, whether

this knowledge is proper or analogous, wholly positive or partly negative, provided it is properly proposed to the intellect.

(b) In the second part of the thesis we hold that the formal object of the intellect is the essence or inner reason of things, that is, the intellect naturally tends to know in a general way what a thing is.

(c) In the third part of the thesis we maintain that the formal object of the intellect, in man's present state, is the essence or inner reason of sensible things; that is, the intellect can have totally positive and direct concepts of those objects only which are perceived by the senses. Spiritual beings, such as the human soul, God, and the like, are known only by inference, analogy and negativo-positive concepts.

Part I—The Material Object of the Intellect Is Every Being.

Proof—The material object of the intellect is that of which the intellect can obtain some knowledge.

But the intellect can in some measure obtain knowledge of every being.

Proof of the Minor—1. The power of cognition of a faculty is in proportion to its elevation above the conditions of matter. The higher the elevation above matter is, the higher also is the power of cognition.

But the human intellect is by its nature spiritual and, as such, above the conditions of matter. Therefore, too, the power of cognition is above the conditions of matter.

But if the power of cognition of the intellect is above the conditions of matter, it cannot be restricted in its operations to the perception of material objects, but can cognize, at least in some way, all things, the material and the spiritual.

2. Our experience tells us that there is no being which the intellect by the acts of apprehension, judgment and reasoning, cannot apprehend if the object is properly proposed to it.

Part II—The Formal Object of the Intellect Is the Essence Or Inner Reason of Things.

Proof—The natural tendency of a faculty indicates what is its formal object.

But the intellect, as its name implies (*intus-legere*), tends by its nature to penetrate into the essence or inner reason of things, into that which makes them what they are.

Part III—The Formal Object of the Intellect in Man's Present State Is the Essence of Sensible Things.

Proof—The formal object of the intellect in man's present state comprises all those objects which are directly apprehended by the intellect and represented by it according to their proper notes and characteristics, and by reason of which all other things are recognized.

But it is matter of experience that the immediate and direct objects of intellectual knowledge are the abstract, universalized essences of sensible things, perceived by the senses and represented by the imagination.

Proof of the Minor—The intellect is determined to action by sensation, and sensation, by material objects.

Thus, the child's first judgments are about material things. So likewise in our abstract reasoning we recur to material objects for illustration of our concepts.

Moreover, the words we use to express, and the images in the imagination which accompany our loftiest thoughts, are originally drawn from material phenomena.

Finally, those who are deficient from birth in any one sense are without direct knowledge of the corresponding object. The maxim, therefore, is true: "nihil est in intellectu quod non prius fuerit in sensu"—"nothing is in the intellect which has not been previously perceived by the senses."

Note—It is evident that our concepts of material objects are completely different from the sensitive representations of them. Thus, if we describe a circle, sight perceives and imagination pictures the concrete, external characters of *this* particular circle, its color, size, position, etc., whilst the intellect forms the concept of what constitutes a circle anywhere and everywhere, independently of all relations of time, space, etc. Sense perceives the individual, the accidental, the concrete; the intellect apprehends the essential, the necessary, the universal, regarding the same object.

Thesis 4—The Intellect Is a Spiritual Faculty, Essentially Different From the Sense-Faculties.

Statement of the Question—1. The intellect

is a spiritual faculty capable of recognizing the innermost nature of things.

A spiritual faculty is one which is *intrinsically independent of matter*, in its existence and its operations.

Dependence on matter is *intrinsic* when the *faculty* exercises its activities through an organ as a partial cause; thus, the senses.

Dependence on matter is *extrinsic* when the concurrence of the organ in the activity of the faculty is only a *condition*. In this latter sense is the intellect dependent on a material organ.

We may also define the intellect as *the faculty which apprehends immaterial things and material things in an immaterial manner*.

2. The question here is whether there is an essential or only an accidental difference between the intellect and the sense-faculties.

An essential difference is one which places intellectual cognitions in an entirely different order from the sense-perceptions, whilst an accidental difference would establish merely a greater degree of complexity in intellectual cognitions.

3. *Opponents*. The thesis is opposed to Sensism, Positivism, Materialism, Empiricism, etc.

These philosophical views, though differing to some extent, are one in the doctrine that all knowledge is ultimately of a sensuous nature.

4. Since a faculty is specified by its own acts and proper objects, the question whether man's intellect is essentially different from the sense-faculties, may be put thus: does man know objects which are essentially different from the proper objects of sense-perception?

Proof—1. A faculty which apprehends immaterial objects and material objects in an immaterial manner is spiritual and therefore essentially different from the sense-faculties.

But the intellect apprehends such objects. Therefore.

Proof of the Major—Faculties whose objects are essentially different, are themselves essentially different.

But, immaterial objects, and material objects apprehended in an immaterial way, are essentially different from material objects and objects apprehended in a material way.

Now, the sense-faculties can perceive only material objects and that only in a material manner, as is evident from the nature of sensation.

Proof of the Minor—1. *From the Objects of Cognition.*

The intellect has the power to form concepts of God, the human soul, being-in-general, the transcendental attributes of being, existence, possibility, cause and effect, right and duty, virtue and vice, truth, etc.

But all these objects are immaterial.

2. *From the Manner in Which the Intellect Apprehends Material Objects.*

The intellect can grasp the essence or inner reason of things, conceiving them as abstracted from all individual, concrete surroundings, and as applicable to all individuals of the same class; in other words, the intellect can conceive them as universal.

But the essence or inner reason of material objects cannot be known as applicable to all individuals of the same class, unless it is known in an immaterial manner.

Proof 2.—From the Act of Self-Consciousness.

Self-consciousness is an act which is essentially above the scope of the senses.

Now, the intellect can perform acts of self-consciousness. Therefore.

Proof of the Minor—That man has the power of reflex consciousness, is evident from interior experience. We know that we can make our acts and ourselves the object of our thoughts.

Proof of the Major—Self-consciousness is not only an act of the mind that makes us aware of our present internal states, but is also a faculty by which we can reflect upon our acts and know ourselves to be the cause and source of them. I know that I am acting in such and such a manner.

But, the sensitive faculties are not capable of acts of reflection, nor can they make themselves the object of their own activity.

For, by reason of their organic nature, the sensitive faculties are immersed in matter and wholly dependent on it.

Furthermore, a material faculty cannot divide itself in such a way that the divided parts are identical with the whole.

In the act of self-consciousness, however, the Ego reflecting is distinguished from the Ego reflected upon, yet in such a manner that both are the same and identical Ego.

Note—When we say that the intellect is a spiritual faculty, we do not imply thereby that it is in no way dependent on the organism. So long as the soul vivifies and informs the body, the stimulation of the organic faculty is prerequisite for intellectual activity. This dependence of the intellect on the organism is *extrinsic*.

In order to show that thought is a function of the brain, Materialists construct theories on phrenology, the facial angle, physiognomy, etc. All that these theories prove, in the supposition that they are true, is that the intellect in its activity is in some way dependent on the concurrence of the organic faculty, a fact that we admit.

ARTICLE 2. THE GENESIS OF INTELLECTUAL IDEAS.

I—ERRONEOUS THEORIES.

Thesis 5—*The Theory of Sensism, Platonic Idealism, Ontologism, Innate Ideas and Traditionalism, Are Erroneous Explanations of the Genesis Or Origin of Intellectual Ideas.*

Statement of the Question—In the preceding article we saw that certain mental products are essentially distinct from those of our sensuous faculties and that they must, consequently, be due to some higher power of the soul.

The next question is: How are these supersensuous results effected?

The answer to the question comprises the problem of the origin of intellectual ideas.

We shall first briefly refute the erroneous views

and then establish the explanation of the Schoolmen.

A. THE THEORY OF SENSISM.

Statement of the Question. Sensism is the very general theory that thought has not an object different from that of sentience and that, accordingly, sense-experience is quite adequate alone to account for all our intellectual knowledge. It is also called Empericism, and comprises the following three phases of development in modern philosophy:

1. Sensationalism denies the existence of a radical distinction between the concept and the sense-image. If they differ at all it is not by a difference of nature but of degree; that is to say, the concept is only another form, a more or less complex transformation, of a sensation.

To this system is allied the Psychology of Association, or Associationism, which puts forward the factor of association to account for this transformation of sensations.

2. Sensationalism, pushed to its ultimate conclusions, has become Materialism. This is a denial on principle of the existence of anything that is not purely and simply material.

3. Positivism is less direct than Materialism in its denials, but it professes a complete ignorance of whatever is supersensuous. On this account it has justly earned for itself the name of Agnosticism. Its fundamental tenet is that observation and experiment can never penetrate beyond phenomena or facts that are either simultaneous or successive, and that those realities

which metaphysics demands beyond these facts the mind does not only not know but is incapable of knowing.

Refutation—Consciousness clearly tells us that we have ideas that cannot be acquired through the senses alone and that cannot be derived directly from sense-perception.

B. PLATONIC IDEALISM.

Explanation. According to Plato what the human mind contemplates as “ideas” are in reality the pure essences of things, what in things is one, eternal and absolute. Further he conceives these ideas as having a real existence apart from things, so that the object of the intellect consists in real universals.

The way our present knowledge of them is accounted for is by the supposition of a pre-natal existence during which the soul was in contact with them, and that in the present existence the person from his birth has retained remembrances of them; thus they are rightly termed innate ideas.

Refutation—Plato lays undue emphasis upon the features of universality, eternity and immutability presented by our abstract concepts. Since he finds them in evident contradiction to sensuous perception, where everything is variable and fleeting, he asserts that the only explanation lies in the supposition of a real world of ideas where they exist as universal independent of and prior to our experience of them.

Plato never realized that these universal ideas which are independent of time and space are first

abstracted from the data of experience and subsequently attributed by acts of reflection to the particular subjects in which they are verified.

C. ONTOLOGISM.

Explanation. The theory of Ontologism holds that we have an immediate and intuitive knowledge of God. This intuitive knowledge of God is the principle of all intellectual cognition. God is the light in which we recognize all things. (Malebranche, Gioberti, Rosmini, Brownson.)

Refutation. Ontologism essentially means that we have an intuitive and direct knowledge of God.

But this assumption is false. Therefore.

Proof of the Minor—1. If we had this intuitive knowledge of God, by the fact that it would be an internal cognitive act, it would necessarily be recorded by consciousness.

But the most careful reflection fails to reveal the alleged intuition of God.

2. The intuition of God in relation to our knowledge of creatures would imply a direct knowledge of God's essence.

But in this life we have no direct knowledge of God's essence.

3. Experience proves that all our knowledge starts from the sensuous perception of material things, and from these our analogical concepts of spiritual things are formed by abstraction and exclusion of imperfections incompatible with an infinite Being.

D. THE THEORY OF INNATE IDEAS.

Explanation. A characteristic of many philosophers, who exaggerate the spirituality of the soul, is to unduly exaggerate the opposition between the mind and the body. Supersensuous mental products, such as ideas of being, unity, the true, the good, the necessary, the immutable, etc., cannot, these philosophers maintain, have arisen by sensuous observation; they must, consequently, have been *innate*, inborn in the mind from the beginning antecedently to all acquired knowledge.

Advocates of this theory in varied form were Descartes, Leibnitz, Rosmini, Kant, etc.

Refutation—That theory is an erroneous explanation of the genesis of ideas which is (a) gratuitous, (b) contrary to experience, (c) illogical.

But such is the theory of innate ideas. Therefore.

Proof of the Minor—(a) The Theory Is Gratuitous.

Man's intellectual knowledge can be satisfactorily explained by the combined action of the senses and the intellect.

(b) The Theory Is Contrary to Experience.

It is quite beyond doubt that no one has had his mind stocked from the dawn of his existence with ready-made ideas. On the contrary, it is a well-attested fact of internal experience that the first state of the human mind is one of pure potentiality, different even from that of habitual knowledge, and this fact is irreconcilable with the existence of innate ideas.

(c) The Theory Is Illogical.

If we have innate ideas they are presumably for us to make use of in knowing external things.

Yet, the application of such an idea to an external thing, the discovery that it is realized in it, can only be an act of recognition, and if we can re-cognize the idea in the object why cannot we cognize it there straightway? For we can and do cognize our ideas by the process of abstraction.

E. TRADITIONALISM.

Explanation. Traditionalism teaches that our ideas cannot be explained in any other way except by tradition of some primitive revelation.

Some extend their doctrine to *all* our ideas, others restrict it to the origin of ideas which concern things spiritual, religious and moral.

Some maintain that it is *physically* impossible to have any ideas without tradition, whilst others say that it is *morally* impossible.

Extreme Traditionalism was proposed by De Bonald and elaborated by Bautain. De Bonald teaches that revelation is the only source of human knowledge. Hence, he asserts the physical impossibility of acquiring any ideas by the native activity of the intellect. We obtain our ideas by the tradition of revelation.

Bautain so modified extreme Traditionalism that he denied innate ideas and maintained that ideas are begotten by words.

Modified Traditionalism. Bonnetty admits that the intellect can by its own activity acquire ideas, but not of spiritual, religious and moral things.

These latter ideas are impossible physically without the means of revelation handed down.

G. Ventura declared that it is morally impossible to obtain clear ideas of spiritual, religious and moral things except through revelation and its tradition.

Proposition One: Words Do Not Beget Nor Arouse any Idea in the Sense of the Traditionalists.

Proof—Words are materially uttered sounds which of themselves have no connection between the ideas they signify, but receive their meaning from the convention and arbitrary agreement of men.

But material sounds of this nature cannot (a) beget or arouse ideas, (b) as a matter of fact do not do so. Therefore.....

Proof of the Minor—(a) The free convention of man cannot determine the meaning of material sounds unless man previous to the agreement has ideas he wishes to express.

(b) When one listens to an unknown language, the words do not beget or arouse ideas, even though the listener has ideas corresponding to those the speaker desires to convey.

Proposition Two: Hence the Doctrine of Traditionalism Cannot Be Admitted.

Proof—The tradition of revelation is a wholly unsuited means to acquire ideas. Therefore.

1. Admitting the physical impossibility of obtaining any ideas by the native exercise of the intellect, the Traditionalist cannot explain the or-

igin of ideas in any other way than that words beget or arouse ideas. But this, as we saw, cannot be admitted.

2. The transmission of revelation cannot be a source of knowledge without antecedent and certain knowledge of the preambles of faith—the existence of God, the possibility and fact of revelation. In other words, man must have sure knowledge of at least some religious and moral truths. These truths, therefore, cannot depend on tradition.

Note—The origin of language.

We consider the question here as it is discussed among Catholic writers. We may ask a twofold question:

1. Could man of his natural power and by himself create a primitive language?

2. If so, did the first man invent language or was it divinely infused?

As to the first question the more common opinion holds that man because of his inborn faculty and inclination to manifest ideas could have invented language.

As to the second question, some think that language was revealed, whilst others believe that man invented language with the assistance of God.

II. THE SCHOLASTIC THEORY.

Thesis 6—The Cognitive Intellect Is a Passive Faculty, Which Is Determined to the Act of Intellection by a Double Cause, Namely, the Active Intellect and the Phantasm, Which by Their Joint Action Produce, As a Prerequisite of Intellection, a Conceptual Determinant.

Statement of the Question—1. General Sketch of the Scholastic Theory. At the root of the problem of the origin of ideas lies the fact that the formal object of intellectual knowledge is different from that of sense-knowledge. The question is how to account for this supersensuous object.

Aristotle held the theory that in the beginning the state of the mind may be compared to an un-inscribed tablet. By his intellect man is capable of knowing, but the faculty itself does not provide him with knowledge. Potentiality precedes actuality. In itself man's intellect is "*intellectus possibilis*," meaning that there is the power of knowledge before there is actual knowledge.

Moreover, this power is passive or receptive and is not sufficient by itself to determine itself to act. To be brought into exercise it requires some sort of completion, which has been called by Aristotle and the Schoolmen "*species intelligibilis impressa*," or, as it may be translated, a conceptual determinant, because it must produce in the faculty a modification or determination which makes an intellectual act immediately possible.

The intellect must, therefore, be modified so that it may produce an abstract representation of the essence of the thing which exists individualized in the phantasm. To bring about this immaterial effect or modification, there must be some immaterial efficient cause which acts in concert with the phantasm.

This principal efficient cause of the conceptual determinant, required to account for the actuation of the intellect, is called by the Schoolmen the active intellect. As operative under the superior

control of this active faculty the phantasm is an instrumental cause in the wider sense of the term.

The combined action of the active intellect and the phantasm is adequate to move the cognitive intellect to an act of intellection.

Consequently, as soon as the cognitive intellect is determined by their conjoint action, it cannot but respond by an act of cognition; it knows the essence of a thing, what it is in the abstract apart from its particular concrete qualifications.

2. *Explanation of the Terms.* (a) The active intellect is an active power whereby the cognitive intellect is modified so as to recognize in a spiritual manner what is concretely depicted in the phantasm.

It is called intellect not because it performs the act of intellection but because it renders the object proportionate to the cognitive or passive intellect. It is called active because in conjunction with the phantasm it produces the conceptual determinant.

(b) The conceptual determinant is the modification or determination of the cognitive intellect required before it can know. It is a mental likeness of the essence of the thing which determines the cognitive intellect to its act.

This likeness, however, is not the formal likeness but only a virtual likeness, which leads to the formal likeness of the object, that is, to the expression by the cognitive intellect of the conformity of its act with the object.

(c) The cognitive or passive intellect is the faculty which expresses the formal likeness of the object, that is, the conformity of the faculty with

the object; it is the faculty which performs the act of intellection.

(d) A phantasm is a picture of a concrete, material object in the imagination.

3. *Is there a real distinction between the active and the passive intellect?*

Some authors say that there is a real distinction between the active and the passive intellect. They are different for the reason that their acts are specifically different. The active intellect is an efficient cause, the principal cause of the conceptual determinant, whilst the passive intellect when duly determined by the conceptual determinant accomplishes the act of knowledge. (So Mercier and others.)

Others are opposed to this multiplication of faculties. They hold that the active and the passive intellect designate only two different aspects of one and the same power; accordingly they are only virtually distinct.

4. It may be well to insist on a very important distinction: the conceptual determinant is not the thing which the cognitive intellect apprehends, but that through which the intellect cognizes the object.

We shall divide the thesis into a number of propositions.

First Proposition: The Cognitive Intellect Is a Passive Faculty.

Proof—From Experience. A child who has not yet learned the elements of arithmetic has the power or faculty of some day understanding the

relation of equality in the proposition "seven plus five equal twelve."

The master who teaches the child, at the moment of teaching him, has an actual cognition of this intellectual truth. When the lesson is finished both master and pupil may occupy themselves with other thoughts, but they may remain informed of this arithmetic truth, with the result that they can think of it again at will.

This example of a class of facts proves our proposition inasmuch as it shows that there are three stages in our knowledge: the radical capacity, the act of understanding, and the permanent possession or habit of knowledge.

In order to pass from the state of mere capacity to that of actual intellection, the faculty must clearly be determined.

Hence, whilst the cognitive intellect is a principle of action, it is one that stands in need of an intrinsic determination or complement to be able to exercise its action, that is, it is a passive power.

Second Proposition: The Conceptual Determinant Is Necessary to Determine the Passive Intellect to Its Cognitive Act.

Proof—In order that the intellect may be the adequate principle of cognition with regard to any object, it must be determined to intellection in some manner.

Now, this determination cannot be effected solely by the phantasm. For, the phantasm is material and a material cause cannot intrinsically determine a spiritual faculty.

It must then be brought about by the conceptual determinant. For, the object must be brought into union with the passive intellect by means of a spiritual likeness of the object which is received by the passive intellect and is the means by which it is determined to the act of intellection.

Third Proposition: The Active Intellect Is the Principal Efficient Cause of the Conceptual Determinant.

Proof—The principal cause must be in proportion to the effect produced. But the conceptual determinant, which is the effect, is spiritual. Therefore the principal cause must also be spiritual. But, the active intellect is the only assignable spiritual cause. Therefore.

Fourth Proposition: The Phantasm Is An Instrumental Cause in the Wider Sense of the Term.

Note—The phantasm must also concur in the production of the conceptual determinant. It is necessary

(a) in order that the active intellect may produce this likeness rather than another;

(b) to explain why this likeness represents this object rather than another.

We hold that the phantasm concurs in the production of the conceptual determinant as instrumental cause in the wider sense of the term.

Proof—The phantasm produces the conceptual determinant either (a) as principal cause, or (b) as instrumental cause in the strict sense, or (c) as instrumental cause in the wider sense.

But it does not produce the conceptual determinant as the principal cause nor as the instrumental cause in the strict sense. Therefore.

Proof of the Minor—1. The Phantasm Is Not the Principal Cause.

We already proved that the active intellect is the principal cause.

2. The Phantasm Is Not An Instrumental Cause in the Strict Sense.

An instrumental cause in the strict sense must concur directly in producing the effect.

But the phantasm does not concur directly in the production of the conceptual determinant because the phantasm is material and the conceptual determinant is spiritual.

3. The Phantasm Is An Instrumental Cause in the Wider Sense.

In order that the phantasm may concur in the production of the conceptual determinant as an instrumental cause in the wider sense it must (a) be so elevated that it may concur in producing an effect which it cannot produce by itself; (b) it must concur efficiently; (c) it must do so indirectly.

But the phantasm does so concur. Therefore.

Proof of the Minor—(a) The phantasm can be elevated through the principal cause, which is ultimately the soul. The conceptual determinant has a twofold causality—spirituality, which it derives from the active intellect, and representativeness of a concrete object, which it obtains from the phantasm.

(b) The phantasm concurs efficiently by giving the conceptual determinant the determination of "thisness."

(c) As has been repeatedly said, the phantasm cannot concur directly; however, it can concur indirectly by means of the soul.

For, all the faculties of man are radicated and rooted in the soul as in the ultimate principle of vegetative, sensitive and rational life. Hence the same soul is the last principle of the phantasm and the conceptual determinant. Both are, to use an illustration, the offspring of the same parent, and there exists a physical sympathy between them because they are united through the same soul.

Fifth Proposition: When Determined to Action the Intellect Apprehends What a Thing Is.

Proof—This proposition follows from the preceding ones. The faculty of the understanding is at first passive, without the power of moving itself to action. Once, however, it is determined in the manner described above, it has everything required for it to come into action; it knows or expresses in its intellectual way the idea or what a thing is.

Note—The first notion the mind expresses to itself thus under the combined causality of the phantasm and the active intellect is the representation of an abstract idea. It becomes universal when the mind has reflected upon the abstract thought-product and when, seeing it stripped of all individualizing notes, it finds it can represent an indefinite number of individual subjects, that it is applicable to each of them inasmuch as it verifies what is common to all.

CHAPTER II

THE WILL

ARTICLE 1. THE EXISTENCE AND OBJECT
OF THE WILL.

Thesis 7—The Rational Appetite, Or Will, Is Essentially Superior to the Sensitive Appetite. Its Formal Object Is the Good As Apprehended by the Intellect.

Statement of the Question—1. Appetite, as we know, signifies an internal inclination or tendency of a being towards what is suitable to or perfective of its nature.

It is twofold: natural and elicited.

By *natural* appetite we mean the tendency implanted in all finite beings in virtue of which they are impelled towards what is suitable to their natures, independently of cognition of any kind on their part.

Elicited appetite is an attraction towards or aversion from an object following upon cognition of the object by the being.

It is twofold: rational and sensitive.

The object of the *sensitive* appetite is the sensible good, whilst the object of the *rational* appetite is the intellectual good. The rational appetite is called *will*.

2. The will may be defined as *the spiritual faculty which inclines towards an object intellectually apprehended as good; or, the will is the*

power of loving, desiring and enjoying that which is apprehended as good by the intellect.

3. *The Object of the Will.*

The *material* object of any faculty is the object as it is with all its accompanying notes.

The *formal* object is the material object with regard to *those notes* only which are attained by the faculty.

The *material* object of the will is every being, whilst the *formal* object of the will is the good as apprehended by the intellect and proposed by it to the will as indifferently appetible.

The range of the will, therefore, is co-extensive with that of the intellect. The adequate object of the intellect, as we proved before, is every being. Now, every being as being is good; so that whatsoever is can be apprehended as good, and hence everything that is can become the object of the will.

On the other hand, an object, however perfect in itself, if presented to the will as lacking in anything short of the absolutely perfect good and so apprehended by the intellect, will not satisfy the capacity of the will and cannot, therefore, necessitate its desire and love.

Whilst an object which comprises all good, if presented to the will as such, will satisfy all its capacity and will, consequently, be necessarily loved.

4. *Definition and Division of the Good.*

The good is defined by Aristotle as the object which every being desires, to which it naturally tends.

(a) The *sensible good* is the object of desire arising from a sense-perception or sense-estimation. This sensible good is always a concrete thing.

(b) The *abstract good* is that in a thing which precisely constitutes its goodness. The desire engendered by this knowledge has for its proper object not the concrete good, but the good as such, that by reason of which concrete things are desirable and worthy to be sought.

(c) The *universal good* is the ideal good which comprises in itself all that is good in particular objects.

(d) The *absolute good* is an object considered good in itself.

(e) The *useful good* is an object considered as good not in itself but as leading towards an ulterior good.

(f) The *agreeable good* is the subjective pleasure accruing from the possession of a good object.

5. *The Opponents.* The opponents of this thesis are all those who declare that the will is not superior to the forces of matter, as also all those who confound the sensuous appetite and the rational appetite, claiming that both are essentially the same.

Part I—The Will Is Essentially Superior to the Sensitive Appetite.

Proof—The will is a faculty which strives after and inclines towards immaterial objects and after material objects in an immaterial manner.

But such a faculty is essentially superior to the sensitive appetite.

Proof of the Major—1. Consciousness is witness that we long for and desire God, happiness, virtue, truth, science, power, honor, etc., objects which cannot be pictured in any sense-perception.

2. From consciousness we also know that we strive after and incline towards material objects which are not pleasing to sensuous nature, simply because the intellect presents them as good under supersensible aspects; e. g., the pain of an operation.

3. Again, consciousness bears testimony that we may, and frequently do, reject objects most attractive to sense for the sake of an immaterial end, e. g., for the sake of virtue, duty, friendship, etc.

Proof of the Minor—1. Such a faculty exercises itself with regard to objects which are essentially different from those of the sensuous order. For the objects of the sensitive appetite are the sensible good, concrete, individual, material things; whilst the will has for its object the immaterial and spiritual.

2. Besides, such a faculty tends towards an object in a manner which is essentially superior to the manner of sensitive appetite. For, the sensitive appetite, because material, can desire its object only in a material way, whilst the will desires an object in an immaterial way.

Part II—The Formal Object of the Will Is the Good As Apprehended by the Intellect.

Proof—That is the formal object of a faculty on account of which it naturally operates.

But the good as apprehended by the intellect is the reason why the will operates. Therefore.

Proof of the Minor—The reason why the will acts may be either (a) evil as evil, (b) something which is neither good nor evil, (c) the intellectually apprehended good.

But it cannot act on account of (a) or (b). Therefore.

1. The will cannot act on account of evil as evil. For evil is not a positive entity. Therefore, it cannot be the reason why the will acts.

2. The will cannot act on account of an object which is neither good nor evil, for that which is indifferent cannot remove the natural indetermination of the will.

Therefore the reason why the will acts is the good as apprehended by the intellect.

ARTICLE 2. LIBERTY OF THE WILL.

A. EXISTENCE OF LIBERTY

Thesis 8—The Will Is Free.

Statement of the Question—1. *Idea and Definition of Freedom.*

In general freedom means exemption from something. However, since freedom is usually applied to the activity of a living agent, it means the immunity of an agent from some restraining force. If we consider the various kinds of restraining forces from which a being might be free, we distinguish three kinds of freedom:

(a) Freedom from *external restraint*, or freedom of spontaneous action. In this sense the

activities of animals are said to be free inasmuch as their movements are not impeded by an opposing physical agent or force—a lion in the wild is free in this sense, but not free when confined to a cage.

(b) Freedom from *moral restraint* is the immunity of an agent from the moral obligation imposed by a lawful superior. In the strictest sense this freedom is found only in God. The restraint of law is a just and due restraint in the case of man.

In a limited sense, however, man is free in this regard concerning those actions which are not prescribed or forbidden by law. In this sense we speak of political freedom, freedom of religion and conscience, etc.

(c) Freedom from *internal necessity*, or *freedom of choice* means not only freedom from external restraint but the absence also of that necessitation which controls the activities of all material beings, the inanimate, the organic and sensitive.

Freedom of choice may be divided into:

(a) Freedom of *contradiction*, which is the power of willing or not willing;

(b) Freedom of *specification*, which is the power of choosing between actions which are specifically distinct.

The essence of liberty lies in the freedom of contradiction. The freedom of specification is nothing else than an exercise of the freedom of contradiction with regard to particular lines of action.

The will as a free power may be defined as *the power of self-determination*.

Freedom of choice may be defined as *that endowment of the will in virtue of which, when all conditions prerequisite for action are present, it may act or not act, may act in this way or another*.

There is only one faculty which is free, the will. All other faculties are governed by necessity. Of course, we sometimes call them free, but this is by extrinsic denomination, inasmuch as these faculties may become objects of free choice.

We do not assert that all the acts of the will are free. The question is whether *any act* of the will is free. "Many of man's acts are not free. Control over our thoughts ceases during sleep; and even when awake, independently of automatic movements, such as breathing, winking, etc., we perform many acts not clearly realized in consciousness. A long train of thoughts may thus have passed through our mind before we, by an act of self-consciousness, advert to the fact and become aware that, although hitherto it has been deliberate, henceforth it is free, and we are responsible for it."

An act of volition in the strict sense, therefore, implies the following elements:

- (a) conception of some object as good or desirable;
- (b) advertence to the possibility of alternative courses of action;
- (c) a judicial act of preference;
- (d) the consequent active tendency of the will towards that side.

2. *Opponents.* (a) Materialists destroy the subject and root of the freedom of the will by claiming that all life is the result of physico-chemical forces.

(b) *Determininism* is the theory that the will is not free and that all our acts, even including those apparently free, are adequately and inevitably determined by their antecedents.

According to the nature of the antecedents which are held to account for our actions determinism is variously denominated.

Mechanical determinism is not distinguishable from fatalism; it makes the will a material force subject like everything else to inexorable mechanical laws.

Physiological determinism likens even our noblest volitions to reflex action.

Psychological determinism is the theory that the will necessarily follows the strongest motive, or what is presented to it as the greatest good.

(c) Modern psychologists quite commonly do not deny that men generally have or seem to have a perception of liberty, but they claim that this conviction is an illusion.

William James gives typical expression to this view. He claims that the question about freedom may be viewed in a threefold way; (a) experimentally, (b) scientifically, (c) morally. In the first case the question cannot be solved, because the testimony of consciousness and introspection is "too crude." Ultimately all depends on association, and association depends entirely on reflex mechanism, and introspection cannot reveal whether the will can interpose.

Scientifically the question of freedom of the will must be denied, because it is against the principle of science which demands uniformity in nature.

We must, however, affirm liberty on moral grounds, because there can be no question of obligation without free will. (Gruender, *Free Will*, p. 50 ff.)

If any one asks how the universal conviction of freedom of the will arose, although the will is always determined, the answer is given: causes determining our will often elude our consciousness, or, at least, are not sufficiently observed by us.

3. *The Arguments.* There are three proofs for the freedom of the will:

(a) The proof from consciousness—the psychological proof;

(b) the proof from ethical considerations—the ethical proof;

(c) the proof from intrinsic reason—the metaphysical proof.

Each of these arguments proves our contention beyond a doubt. "If after the due consideration of the evidence which our arguments furnished," writes Father Gruender, "the verdict is to be that man is not free, then we must declare bankruptcy not only in philosophy but also in the natural sciences; even our common sense without which we cannot perform the most ordinary actions in our intercourse with all men, must go." (Gruender, *Free Will*.)

Proof—1. The Psychological Proof.

Note—We immediately experience the Acts of the will by consciousness. But this perception is such that we conclude immediately to the freedom of the will.

Consciousness gives unmistakable, constant, irresistible testimony that there is in us a faculty by reason of which we have such control over some of our actions that we are free to perform them or not to perform them.

But the unmistakable, constant, irresistible testimony of consciousness must be admitted as infallible. Therefore.

The Major—Every one is conscious of the fact that before he acts, whilst he is acting, and after he has performed the act, he has control over some of these actions.

(a) Before he acts he deliberates, he reflects upon what he ought to do, he considers the motives for acting or not acting, etc.

Moreover, through consciousness man realizes that his actions in the case depend on an element strictly *his own*, namely, on *free choice*; he realizes that it is in the power of the will to determine which motive or motives are to prevail.

Again, consciousness tells man that whilst he is deliberating about the course of action he is to follow, and actually before he makes his choice, he can prolong the time of reflection or come to a decision at once.

(b) Whilst he is acting, man clearly knows that the determination to act proceeds from his choice; that it is within his power to finish the

act begun, or to postpone it at will, or desist from it at any time he wishes, even contrary to a previous decision.

(c) After he has performed the action, man approves of his action if he has acted aright, he enjoys peace of mind and determines to act in like manner in the future; whereas, if he has acted wrongly, he is sorry, he reproaches himself, he determines to act better in the future.

But, approval of an action as well as reproach and blame are not given to actions which were performed involuntarily or from necessity.

Proof—2. The Ethical Proof.

Statement of the Question—1. If freedom is denied the whole moral order falls.

Hence, in this argument we ask whether freedom of the will is necessary as a basis of the moral order. We take it for granted here that there is a moral order as it is commonly understood by all people, namely, that right, obligation, duty, etc., are real things.

2. We may also put the question as follows:

(a) If we suppose that the experience of freedom is an illusion, if, accordingly, man's will is always bound by the greater attraction, can it be said without being absurd that man has rights, is bound by obligation, etc.?

(b) Can those who theoretically deny the freedom of the will be men morally good, if they reduce their theory to practice?

We say in reply to the second question that no one can carry out this theory in practice with-

out being morally bad, and, if this were done universally by all men, the entire moral order would be destroyed and the foundations of society would be subverted.

3. *Terms.* (a) Obligation means the moral necessity laid on the will by a superior to do or omit something.

(b) *Right* is a moral, inviolable power to do or possess something.

(c) *Imputability* is that property of the action in virtue of which it may be called one's own.

(d) *Responsibility* is that state in man according to which he is worthy of praise or blame, reward or punishment.

(e) *Punishment* is a physical evil inflicted on account of a moral evil.

(f) *Reward* is a physical good given in return for a moral good.

Proof—The moral order is real, that is, there is real obligation to perform some actions and to omit others, even with the loss of life, honor, fortune, etc.

There is real right, imputability, responsibility, there is an intrinsic distinction between morally good actions and bad actions.

But all these ethical ideas would mean nothing if the will is not free.

Proof of the Minor—(a) There can be no obligation, for instance, if I have not the liberty to do this or omit that.

(b) If man's will is not free, his actions are no more under his control than are those of the animal under its free control.

2. A doctrine which cannot be put into practice without destroying the moral order is pernicious.

But the theory which denies the freedom of the will cannot be put into practice without destroying the moral order. Therefore.

Proof of the Minor—The doctrine of our opponents put into practice means that man always follows the greater attraction.

But man cannot always follow the greater attraction without being morally bad, since the greater attraction is not infrequently bad.

Consequently, if all men were always to follow the greater attraction, it is clear that the whole moral order would fall to the ground.

Proof—3. The Metaphysical Argument.

In consequence of his rational nature man is capable of forming objectively indifferent judgments, that is, judgments which exhibit the motives for aiming at an object or rejecting it, for pursuing a certain course of action or not pursuing it.

But these objectively indifferent judgments would have no meaning if man's will is not free. Therefore.

Proof of the Major—In the present life no object presents itself as good and attractive under all aspects:

(a) not *finite* goods. For, besides the very limitation they imply by being finite, on account of the difficulty of their attainment, the uncertainty of their possession, etc., there are always

some reasons why they are undesirable and on account of which man may turn from their pursuit.

(b) Not God, the *infinite* good. For, the inadequate and obscure knowledge we have of God in this life, the difficulty connected with duty and the practice of virtue, the conflict between man's pride and sensuality and righteousness, etc., make the pursuit of the true and unalloyed good disagreeable in many respects to human nature.

Hence, the intellect can present motives for striving after this Supreme Good as well as motives for not doing so. In other words, the intellect can form objectively indifferent judgments regarding every good, finite and infinite.

Proof of the Minor—That man has this power we have already observed.

Now, the intellect is not a faculty gifted with freedom.

Therefore, unless the will is free these objectively indifferent judgments would be absolutely without purpose. Therefore.

Note—1. It may be asked: Might not free will or the power of choice be impeded by moral forces affecting man's rational appetite? Might not the fascinating influence of some particular object or good be so strong as strictly for the time being to overcome man's will?

This possibility is not excluded. But in that case the will, by tending towards such a good, would not be free. The act would be an "impulsive volition," that is, the mere resultant of forces playing upon the will—character plus present motives.

Note—2. The Control of the Will Over the Other Faculties.

(a) The will can *apply* the intellect, the internal and external senses, as also the motor powers to action.

(b) Regarding the judgments of the intellect, when the connection between the subject and predicate is not self-evident and is apprehended as such, our will may find some real or apparent good in adopting a particular view on the question. In such a case it can fix the attention of the intellect on the reason for that view and on the objections against any other and compel the assent to the proposition as useful, prudent, pleasurable, etc.

(c) In regard to the sensuous appetite, the will can control it *indirectly*, inasmuch as it can control the application of the external and internal senses to such objects as would excite sensuous desire or aversion.

Note—3. The Will and the Intellect.

The will can seek that only which is good or appears to be good. We are so constituted that we must be happy and must always seek happiness. All our actions together with the volitions on which they depend are necessarily directed to this end. We may often be mistaken about the means, or the means may be adapted to a partial attainment of this end, but the object which is ultimately in view is invariably the greatest amount of happiness attainable under the circumstances.

Therefore, the will is naturally directed towards the good.

Hence, too, its freedom must lie in the power to identify or refuse to identify the motives with the good towards which it is naturally directed.

But the will and the intellect are distinct faculties, and we must not confuse the functions of the one with those of the other.

It is the function of the intellect to estimate the relative value of the different motives and propose them to the will. The will then chooses the one which is considered on the whole to be the best.

However, it is the will which initiates our actions, mental and physical. Hence, the consideration of the motives can take place only at the bidding of the will.

We have, then, apparently this peculiar situation: the intellect and will obey one another in turn. The will commands the intellect to consider the motives before it, and the intellect determines the action of the will by the report which it makes upon them.

But, before the will can bid the intellect investigate, the subject must somehow or other have been presented to it. And, since these subjects are necessarily intellectual ideas, they must be present in the intellect before they can be transmitted to the will.

Hence, the freedom of the will is exercised in initiating or refusing to initiate the process of investigation in regard to any particular motive.

Note—4. The Will and Evil.

In the strict sense liberty does not imply the power of choosing evil. This power is an imper-

fection, just as the power of self-deception is an imperfection in our reason.

A man chooses evil under the guise of good. Such an action is possible on account of man's possession of many faculties, each of which has a different proper object; what is the real good of one is not necessarily that of another—as is manifest in the case of the higher and lower appetites, where what is truly the pleasure of the lower is sometimes not at all the good of man as a rational being.

When the will seeks an inferior good in place of what is upright, it violates the law of its nature, thereby acting inconsistently with right order and abusing its liberty. Hence a moral evil is called a defect, unrighteousness.

Since the liberty to commit evil is an imperfection of the will, to claim it as a right either for one's self or for others is manifestly absurd. When, therefore, a legitimately constituted authority, acting within the limits and observing the precautions demanded by prudence, takes measures to prevent in the family or in society vice or error leading to vice, it is protecting liberty and not curtailing it. Unbridled liberty is no true liberty but license, a counterfeit of it.

B. NATURE OF FREEDOM.

Thesis 9—Every Free Action Must Be Preceded By An Objectively Indifferent Judgment, Whilst Active Indifference Is Necessary on the Part of the Faculty.

Statement of the Question—1. Conditions for Freedom:

(a) Consciousness and attention are necessary. There are, of course, various degrees of consciousness and attention, but if they are entirely absent, there can be no question of freedom.

(b) The most important condition is intellectual deliberation, that is, the weighing of motives intellectually apprehended. Every free act, in other words, must be preceded by an objectively indifferent judgment.

2. An objectively indifferent judgment is one which proposes the pros and cons, the reasons for or against, a definite course of action. It proposes an object as desirable on the one hand and as not desirable on the other. This involves two judgments: the one proposes the motives for seeking the object intellectually apprehended, the other exhibits motives for rejecting it.

3. By indifference we mean in general that property in virtue of which a faculty is not determined to a particular line of action. Applied to the will, it means that endowment in virtue of which the will is not restricted to seek a certain object in particular, but is able to determine itself; it is nothing else than the power of choice.

Since the will determines itself, the indifference of the will is called active indifference.

Part I—An Objectively Indifferent Judgment Must Precede the Free Action.

Proof—In order that the will may act freely, it is necessary that it be not determined to a certain line of action by the object.

But in order that it may not be determined thus by the object, the object must be proposed as indifferently appetible.

Therefore an objectively indifferent judgment is required.

Proof of the Minor—If the object is not proposed as indifferent, it is proposed either (a) as evil in every respect, or (b) as entirely good.

But if the object is proposed as entirely evil the will cannot act, because its formal object is the intellectually apprehended good. If the object is proposed as completely good, the will is drawn towards it by necessity.

Part II—Active Indifference Is Required on the Part of the Faculty.

Proof—Freedom is a property of the will.

But if the will is not actively indifferent, the will would be determined to action by a cause from without.

But if the will is determined by a cause from without it is not free, since the action would not be under the control of the will.

Thoughts Which Will Obviate Some Difficulties.

1. It is quite clear that it is impossible to act without a motive. It may be a good or a bad mo-

tive, adequate or inadequate, but without a motive of some kind action, and, consequently, volition is practically inconceivable.

2. It is obvious that the strength and influence of a motive are very largely determined by character; man's likes and dislikes depend on what his character is.

3. It is also to be admitted that man's character is formed to a great extent by experience through the acquisition of habits and by heredity. But this is not all. There is something involved in the constitution of motives which goes far beyond.

4. Since there is a vast number of objects in regard to which all men are disposed alike, it is quite true that the action of a number of persons in given circumstances can be predicted with more or less certainty, according to the extent to which the disposition prevails among men. But, as the community of interests regarding the motive presented decreases, the possibility of prediction will also decrease.

5. It is true that God knows all our future free actions; but He knows them just as they are to be, namely, as free. God's knowledge of such actions no more necessitates them than our knowledge of what we are freely doing necessitates our actions.

CHAPTER III.

THE NATURE OF THE HUMAN SOUL.
ITS RELATION TO THE BODY.
ITS ORIGIN.ARTICLE 1. THE NATURE OF THE HUMAN
SOUL. ITS SUBSTANTIALITY, SPIRITUALITY,
SIMPLICITY, AND IMMORTALITY.

We have hitherto studied the character of thought and volition. We now pass on to enquire into the nature of the principle from which these actions proceed.

By the human soul we understand the subject of our mental life, the ultimate principle by which we think and will.

A principle is that from which something proceeds; an ultimate principle is the last source.

Thesis 10—The Soul Is a Substantial Principle.

Statement of the Question—That the human soul is a substantial principle is evident from what we have seen regarding the acts of intellect and will.

Substance is that which exists in itself.

It is contrasted with accident, or that which by its nature exists in another as in its subject of inherence.

When we say that the soul is a substantial principle we mean to say that the soul exists in itself and does not require a subject of inherence.

Proof—Accidents must have a subject in which they inhere.

Now, consciousness clearly tells us that there are in us accidental modifications and that there is an abiding subject in which they inhere.

The abiding subject of inherence of these accidents is the soul.

Therefore the soul is a substantial principle.

Proof of the Minor—1. Consciousness clearly testifies that there are in us various accidental modifications, a constant succession of thoughts, desires, affections and feelings, and that these modifications do not exist in themselves.

2. At the same time consciousness tell us that in the midst of these manifold changes there is the thinking subject which remains unchanged.

Now, this thinking subject is either an accident or a substance. If it is an accident, the question of inherence recurs indefinitely, since there must be a subject in which the accidents inhere.

Thesis 11—The Human Soul Is Spiritual.

Statement of the Question—Spiritual is opposed to material. Material signifies *intrinsic* dependence on an organ, or, in general, on matter.

Spirituality, then, signifies *intrinsic independence of matter* for the faculty's existence and some of its operations.

The attribute of spirituality is sometimes confounded with that of simplicity. But it is important to distinguish the two. By saying that a substance is simple we mean that it is not composed of parts; by saying that it is spiritual we

mean that in its existence and in its operations it is intrinsically independent of matter.

The principle of life in animals is an instance of a simple principle which is nevertheless not spiritual, since it is absolutely dependent on the organism.

Proof—1. The human soul is the subject of various spiritual activities.

But the subject of spiritual activities must itself be spiritual. Therefore.

Proof of the Minor—The minor proposition is merely an application of the axiom that the operation of an agent follows the nature of the agent; an act cannot transcend its cause.

Proof of the Major—1. *From the Spirituality of Thought.*

We are capable of apprehending abstract ideas, such as truth, unity, etc. We can form ideas of purely spiritual beings, such as God. We can understand necessary truths. We can apprehend possibilities as such. We can see the relation between ideas and the logical sequence of conclusions from premises.

But such operations, as has been shown, are spiritual phenomena, which must accordingly proceed from a spiritual faculty.

Therefore the soul which is the last source of these actions must be spiritual.

2. *Proof From Psychological Reflection.*

The human mind can bend back upon itself and reflect.

But an act of this sort cannot proceed from a material agent. Therefore.

The Major—I recognize the absolute identity between myself thinking about something and myself reflecting on that thinking Ego.

Proof of the Minor—One part of a material substance may be made to act upon another; one atom of matter may attract, repel, or in various ways influence another; but that precisely the same portion of matter should act and be acted upon in its own case, is repugnant to all that common experience and science teach.

If, then, this unity of agent and patient, of subject and object, is so contrary to the nature of matter, assuredly a faculty whose action is intrinsically dependent on matter or an organ cannot be capable of self-reflection.

3. *Proof From the Will.*

Our consciousness, history and biography, the existence of poetry and romance, overwhelm us with evidence of the fact that man is attracted not only by the sensuous good but also by the supersensuous good.

But a material principle of action cannot be attracted by the supersensuous good.

Therefore there must be in man a principle of action which corresponds to this attraction to the supersensuous good.

The Major—As a matter of fact, love of justice, of truth, of virtue, of right for its own sake, etc., are motives and impulses which have inspired some of the greatest and noblest works in the history of the human race.

4. *Proof From Freedom.*

We are free. We are capable of self-determination, and in the act of free choice we can deliberately reject all that is attractive to sensuous desire and can choose that from which the senses shrink.

But an organic faculty cannot thus control or coerce the exercise of its own activity.

Therefore, there must be a spiritual principle which is the source of this activity.

Dependence on Matter.

Dependence on matter is twofold, intrinsic and extrinsic.

In reference to the soul its dependence on an organ is *intrinsic* when the act elicited proceeds from the soul and body as one principle of operation—such is the case with vegetative and sensitive life.

The dependence is *extrinsic* when the action proceeds from the soul alone as its real principle. Although in its union with the body the soul cannot perform any act unless the body assists in its exercise, yet this dependence is extrinsic and does not flow from the very nature of the soul.

Thesis 12—The Soul Is Simple.

Statement of the Question—1. Simplicity means absence of composition.

A thing may be composed physically of two kinds of parts—quantitative and essential.

Quantitative parts are those which occupy space and are situated outside of each other.

Essential or substantial parts are those which make up the very reality and nature of the thing.

The meaning of the proposition that the human soul is simple is that the soul has neither quantitative nor essential parts.

2. *Opponents.* W. James perverts our doctrine by saying that the soul is a "detached existence, sufficient unto itself." (Principles of Psych., vol. I, p. 6.)

Paulsen and others consider our teaching in the sense that the soul has the simplicity of a mathematical point, which has its seat in a certain part of the brain and from there directs the body.

Dr. Paul Carus, of Chicago, holds that the soul is "a kind of ethereal fluid endowed with several mystical qualities."

The objection these men have against us is that we cannot express the simplicity of the soul except negatively. Hence the query of Paulsen: Does the soul consist of negations?

Proof—1. From the Simplicity of Ideas.

The soul is the ultimate principle of intellectual ideas.

But the ultimate principle of intellectual ideas must be simple.

*Proof of the Minor—*Experience teaches every one that he is capable of forming abstract ideas, such as truth, being, unity, virtue, etc., ideas which by their very nature are simple.

Now, if the indivisible idea, say of truth, were the result of an extended principle, such as the brain in the supposition of some, either

(a) different parts of the idea must belong to different parts of the brain; or

(b) each part of the brain must be the subject of the whole idea; or

(c) the whole idea must belong to a single part of the brain.

But the first is absurd. For, the act by which the intellect apprehends the idea of truth, being, and the like, is an indivisible act of thought.

The second assertion is also impossible. For, if different parts of the extended principle were each the principle of the whole idea, we should have at one and the same time not one idea but many ideas of the same object. This is evidently not the case.

Thirdly, if the whole idea were located in one part of the brain then this part would either be simple or composite. Clearly it cannot be simple; if, however, it is composite, then the series of alternatives will recur until we are forced to admit a simple principle.

Proof—2. From the Acts of Judgment and Reasoning.

The acts of judgment and reasoning cannot take place in an extended subject. Therefore.

Proof of the Antecedent—Each of these acts consists in the comparison the mind makes between two objective ideas or propositions, and in the consent which is given to their identity or diversity or the conclusion drawn from the premises.

Now, in order that comparison may take place at all, the things compared must focus in one and the same point, whilst the assent is a simple, undivided act. Therefore.

Proof—3. From Psychological Reflection.

The human soul bends back upon itself by an act of reflection in such a way that the entire thinking principle becomes the object of thought.

But such an act of reflection would be impossible if the soul were not simple. Therefore.

*Proof of the Minor—*If the parts were not extended, a thing which is not possible, each part would at best recognize its own proper acts. If the parts are extended, there could at best be reflection of one part upon the other, but there could be no act of reflection of the whole soul upon itself, and consequently no recognition of the soul.

Thesis 13—The Soul Is Immortal.

*Statement of the Question—*1. Immortality, etymologically considered, means freedom from death. Death signifies the cessation of life. Hence, immortality in the positive sense means perpetuity of life.

Immortality may be taken in a threefold sense:

(a) Essential immortality consists in this that it is a contradiction for the being not to exist. Clearly this immortality belongs to God alone.

(b) Gratuitous immortality is the impossibility of cessation from life which proceeds from a preternatural gift of God.

(c) Natural immortality is that by which the soul of its very nature postulates continuance in existence after its separation from the body. Hence, although the soul depends on God's will for its creation and preservation, yet in harmony with His ordinary power He cannot deprive it of its existence. It is of this immortality we speak in the thesis.

2. The cessation of life may be brought about in either of two ways, by annihilation of the living being, or by corruption of the vital principle.

Annihilation means the reduction of a thing to absolute nothingness.

Corruption, in the philosophical sense, may be twofold:

(a) essential corruption which signifies the dissolution of a being into its constitutive or component parts, as in the death of man, the combustion of wood, etc.

(b) accidental corruption takes place indirectly by the decomposition of the subject on which the being depends, as, the disappearance of the shape or color from a ball of wax.

A being, therefore, is incorruptible when it is incapable of perishing either by decomposition into constitutive parts or by destruction of the subject in which it inheres or upon which it depends for its existence.

Part I—The Soul Is An Incorruptible Substance.

Proof—We have already proved that the soul is a simple and spiritual substance.

But a simple substance is incapable of essential corruption, because it has no constitutive parts into which it might be resolved; whilst a spiritual substance cannot be corrupted indirectly, since it does not depend intrinsically on the body.

Part II—The Human Soul Continues After Death.

Proof—1. From Man's Desire for Happiness.

A natural, irresistible, universal desire which is in harmony with the dictates of human reason cannot have been implanted in man's nature by a perfectly wise and just God with the intention of its universal, necessary and final frustration.

But, unless the soul continues after death, such would be the case. Therefore.

*Proof of the Major—*That this desire exists is evident from our personal experience and the experience of others and from the history of the whole human race. Moreover, it is clear that man's yearning for happiness cannot be satisfied by any or all earthly goods. Health, strength, beauty, honor, intellectual gifts, etc., fall to the lot of few. Even where many of them or all are combined, we know that there may be found not only absence of happiness but even painful discontent and misery.

Therefore, anything capable of completely satisfying the innate desire for happiness is, in the present world, beyond the wildest hopes of man.

Unless, then, we are prepared to predicate folly and cruelty of God, we must admit a future ex-

istence in which this desire can meet its proper object.

Proof—2. From the Moral Law.

God has inscribed His moral law in our rational nature, whereby He commands us to do right and avoid wrong.

Moreover, since He is infinitely wise, holy and just, He must have fortified this law with a perfect sanction.

But such a perfect sanction is not found in this life.

Therefore it must be found in the next. Therefore, too, the human soul must continue to exist after death.

*Proof of the Major—*Our own consciousness gives us the most intimate testimony that we are under such a law.

Furthermore, the study of the laws, literature and religions of peoples, investigation into the customs and moral ideas of savage tribes, the researches in philology, etc., bear witness to the universality of ethical conceptions, which are based on the moral law.

Without a sufficient sanction such a law would obviously be inadequate and ineffective and, therefore, incompatible with the character of an all-wise and just law-giver.

*Proof of the Minor—*It is a fact of common observation and history that a sufficient sanction is not found in this life.

For, the goods and evils of this world are often distributed inversely to desert. Many self-sac-

rificing, virtuous men meet with continual sufferings and trials, and that during a great portion of their lives, whilst many wicked men enjoy temporal prosperity to the end.

This cannot be the final outcome of life. For, an infinitely holy and just God cannot allow that it is ultimately better for those who break His law, who violate His precepts, and degrade the nature by which they are like to Him, than for those who observe His commandments and conform their conduct to the archetype of holiness.

Therefore, there must be a future existence in which the present deficiencies of life are set right.

Proof—3. From the Consent of Mankind.

Morally speaking, at all times and among all nations there has been found a belief in a future life.

But such a belief and conviction, in direct opposition to all sensible appearances, must spring from man's rational nature and must be allowed to be true, unless we are ready to affirm that man's rational nature leads him inevitably into error.

Therefore, we are bound to admit the trustworthiness of this universal belief under penalty of intellectual suicide.

Part III—God Will Not Destroy the Soul.

*Proof—*God acts with wisdom in all His works.

But, there is no wisdom in creating a being capable and necessarily desirous of living forever and then annihilating it after a time.

Therefore God will not destroy the soul.

ARTICLE 2. THE UNION OF BODY AND SOUL.

Thesis 14—The Human Soul and Body by Their Union Form One Nature and One Person.

Statement of the Question—1. False Views.

The theories concerning the nature of man and the relations between body and soul may be classed as the dualistic and the monistic.

The monistic theory does not allow anything spiritual; the whole world is nothing else than matter and force.

The modern solution of the question is called Psycho-physical Parallelism. It comprises three tents: (a) our physical life is only a series of states, without there being a soul-substance; (b) psychical acts and physiological actions are not the same realities; (c) there is not and cannot be any efficient influence of the first upon the second or vice versa. The best known exponent of this theory is Professor Wundt who stoutly denies the reality of substance.

Psycho-physical parallelism, either under the empirical form adopted by Wundt or as a part of a monistic metaphysics, stands today as the only psychological theory opposed to the scholastic theory of substantial unity.

Dualism teaches that mind and body are two distinct principles. False dualistic theories are the following:

(a) According to Plato the rational soul is a pure spirit incarcerated in the body on account of some crime committed in a pre-natal existence. Its relation to the body is analogous to the relation of a rider to his horse or a pilot to his boat.

Refutation—1. There is not a shred of evidence for a pre-natal existence.

2. The doctrine of Plato would make man not one but two distinct beings.

(b) *Occasionalism*—Occasionalism represents the soul and body as two opposed and distinct beings, between which no real interaction can take place naturally. It is God who effects changes in both. On the occasion of a modification of the soul He produces an appropriate movement in the body and vice versa. All our sensations, thoughts and volitions are produced by Him.

Refutation—1. This theory renders purposeless the wonderful mechanism of the sense-organs and destroys the nature of the rational faculties.

2. It is in direct conflict with the testimony of consciousness which tells us of our personal causality in the exercise of volitions and self-control.

3. Occasionalism involves the gratuitous assumption of a constant miracle.

(c) *The Theory of Pre-Established Harmony.*

Leibnitz held that the soul and the body are entirely separated; that the soul's acts succeed one another and form one series, and that the acts of the body form another series, and that between these series there is no interaction.

God in the beginning foresaw what the actions would be and established a harmony between the one series and the other. Hence the actions of the soul and body proceed like two clocks started together in a divinely pre-arranged correspondence.

The objection to this theory is the same as the objection mentioned above. The union between mind and body is accidental, and thus we have two beings and not one.

2. When we say that soul and body by their union form one nature we mean that from their union results one source of operation. For, the nature of a being is simply its essence viewed as the source of its actions.

A "suppositum" is an individual nature conceived as a complete being existing by itself and not communicated with another.

The "suppositum" is, therefore, the entire and complete source of all operations. Hence arises the axiom: actions are referred to their "supposita."

When the "suppositum" is gifted with reason, it is called a person.

A person is an individual substance endowed with reason.

The Soul and Body by Their Union Form One Nature.

Proof—The nature of a being is simply its essence viewed as the source of its operations.

Therefore, the soul and body by their union form one nature, if from their union arises one source of operation.

But such is the case. Therefore.

Proof of the Minor—That from the union of body and soul a new source of operation arises is evident from the fact that man is capable of vegetative and sensitive activities.

But vegetative and sensitive activities are not of the soul alone nor of the body alone, but of the composite being.

The Soul and Body by Their Union Form One Person.

Proof—The soul and body by their union form one person, if by their union they form one individual substance endowed with reason.

But the soul and body form such an individual substance by their union. Therefore.

Proof of the Minor—Introspection and external observation establish that our vegetative, sensitive and rational activities have their source in and belong to one and the same self. The true human individual is neither consciousness, nor soul, nor body, but the complete Ego, the living rational being arising from the substantial union of both principles.

Thesis 15—There Is in Man One Soul Which Is the Substantial Form of the Body.

Statement of the Question—1. According to scholastic philosophy the soul is described as the substantial form of the body. According to the Schoolmen every being is conceived as the composite of two factors: the one active and determinant, the other determinable; the first is called the form, the second primary matter.

In every living being the vital principle is the form; it is the determining factor which defines its essential nature and from which proceed the activities by which the living being is separated from all other classes of beings.

Hence, a substantial form is defined as a determining principle which by its union with the subject it actuates constitutes a complete substance of a determinate species.

2. When we say that the human soul is the substantial form of the body, we assert that the soul, although it is an incomplete substance and distinct from the body, is nevertheless so united with the body that by this union it constitutes a complete substance—a human being.

The human soul is said to be an incomplete substance because, although it is spiritual and capable of existing apart from the body, it has a natural aptitude to be united with the body to form one complete substance.

3. We maintain, furthermore, that there is only one soul in man. Plato allotted to the human body three distinct souls, the vegetative, the sensitive and the rational.

Some modern psychologists hold that there is in man besides the rational soul a vital principle which is the source of organic life.

Part I—There Is One Soul in Man.

Proof—There is only one soul in man if there is in him a natural unity of activity.

But there is in man a natural unity of activity. Therefore.

Proof of the Minor—Experience shows that there is in man an intimate interdependence between the activities of the vegetative, sensitive and rational life. We know, for instance, that too much attention of the mind impedes sensation

of sight and hearing and injures digestion. Too strong an exercise of the imagination affects the judgment and organic life. Strong emotions of the sensuous appetite, have an influence on the circulation of the blood, on thought and reasoning.

But this interdependence is inexplicable if it proceeds from distinct and separate principles. For if there were several distinct principles of life in man, each principle would act immanently and hence would not impede the action of the other. Immanent actions can only impede each other if they are rooted in one and the same principle.

Part II—The Soul Is the Substantial Form of the Body.

Proof—If the body had its own existence and the soul likewise its own, body and soul would necessarily be two subsisting things.

Now, two subsisting things, no matter how closely they approach each other or how intimate be their action, ever remain two things and never become one substantial unit.

Therefore, every spiritualistic theory which does not regard the body as first matter to which the soul communicates its own existence, must fail to account for the substantial unity of man and the intrinsic union of matter and mind that is to be found within him.

Thesis 16—The Human Soul by Its Essence Is Present in the Whole Body and in All Its Parts; But All Its Activity Is Not Exercised in Every Part of the Body.

Statement of the Question—There have been many discussions among philosophers, ancient and modern, as to the precise part of the body which is the seat of the soul.

Some located it in the heart, others in the blood, others in the brain; (so Plato and Descartes.)

These views seem to have arisen from the erroneous opinion that simplicity of essence is a spatial simplicity, like that of a mathematical point.

However, the simplicity of the soul does not consist in the minuteness of a point. The soul is immaterial, a substantial source of energy which, though not constituted of parts, is yet capable of informing and exercising its power throughout an extended subject. Such a reality does not, like a material entity, occupy different parts of space by different parts of its own mass. In scholastic philosophy it is described as present throughout the body which it informs not commensurably but definitely; it is ubiquitously throughout the body.

Part I—The Human Soul by Its Essence Is Present in the Whole Body and in All Its Parts.

Proof—The soul is the substantial form of the body.

But the substantial form of the body vivifies and actuates its entire material co-efficient so as to constitute with it one complete living being. Therefore.

Proof of the Minor—1. It is only by its immaterial presence and union with the body that the soul can actuate and vitalize the body.

2. Since the soul is an indivisible spirit, wherever it is present it must be present by its essence.

Now, the soul gives specific being to the whole body and to all its parts. Therefore.

Part II—The Soul Does Not Exercise All Its Activity in Every Part of the Body.

Proof—Some powers of the soul require particular organs to perform their proper activities.

But these organs are not in every part of the body.

Therefore, the functions of the compound which require a special organ can evidently be exercised only in that part of the body where the organ is.

ARTICLE 3. THE ORIGIN OF THE HUMAN SOUL.

Thesis 17—The Soul Is Not Begotten by the Parents But Created by God.

Statement of the Question—1. *Erroneous Views.*

The theories regarding the origin of the soul may be divided into three: the theory of Emmanation, the theory of Traducianism, the theory of Creation.

(a) According to the theory of Emanation the human soul is an emanation of the divine substance; therefore it is part of God. This is the theory of the Pantheists.

That this theory is in conflict with the simplicity and absolute perfection of God is proved in Natural Theology.

(b) The theory of Traducianism seeks to find the origin of the soul in the parents. It contends that the soul is transmitted to the offspring by the parents. The manner of propagation is variously explained.

(aa) Some maintained that the soul like the body is produced by material generation.

(bb) Others thought that the soul came into being by a sort of spiritual generation, distinct from corporeal generation.

Part I—The Soul Is Not Begotten by the Parents.

Proof—(a) The rational soul cannot be derived from the body of the parents because a spiritual substance cannot be produced by a material element.

(b) The derivation of the soul from the soul of the parents is equally untenable. For, the human soul is simple and immaterial.

But a simple being has no parts and cannot, therefore, be split into parts.

Part II—The Soul Is Created by God.

Opposed to the above theories stands the theory of Creation. According to this doctrine each human soul is produced by the creative power of God.

Creation means the calling of a being into existence from absolute nothingness; or, the pro-

duction of a thing according to its whole substance.

Proof—Each human soul is a contingent, spiritual substance.

But a contingent, spiritual substance cannot be produced except by the creative power of God. Therefore.

Proof of the Minor—The material things round about us are the result of transformation or change.

But a spiritual being, intrinsically independent of matter, cannot be the result of change, because in that case it would, like its cause, be material.

Therefore, the soul must have originated in some other manner.

But, the only way left is creation.

WHEN IS THE HUMAN SOUL CREATED?

Thesis 17—*The Human Soul Is Not Created Before It Is United With the New Organism.*

Statement of the Question—Plato, Philo, Origen and others, believed that the human souls were created long before they are united with the body.

Leibnitz thought that all the souls were created on the sixth day of creation and were enclosed in small organic bodies, ready to be evoked to rational life when the fitting conditions were supplied.

Proof—The soul is an incomplete substance, naturally destined to be united with the body.

But every opinion which maintains that the human soul existed before the union with the body

supposes the soul to be a complete substance only accidentally united with the body. Therefore.

Moreover, the souls, before their union with the body, either exercised vital activity or they did not. If they exercised vital activity, they ought to retain some memory of these operations; if they did not, there was no purpose in creating them before their union with the body.

THE TIME WHEN THE SOUL IS UNITED WITH THE BODY.

As to exact moment when the soul is united with body, two opinions prevail among the Schoolmen.

1. The first is the view of St. Thomas. He held that three souls are successively produced in the generation of man.

At first the embryo is informed by the vegetative soul. Thereupon, when through the agency of this vegetative soul the corporeal element has been more fully developed, the sensitive soul comes into existence and the vegetative soul recedes. The sensitive soul, in turn, perfects the organism so as to fit it for the reception of the rational soul. When the proper development has been reached the sensitive soul ceases and the rational soul is created and united with the body. This rational soul is virtually vegetative and sensitive.

Some modern scholastic philosophers also hold this view.

Reasons for This View.

(a) Nature does not operate by leaps and bounds in the production of her works.

(b) The rational soul cannot be united with any sort of organism but only with a body that is duly developed.

(c) Every development which follows after the human organism has been formed is called growth. Now, they say, every evolution of the human being which preceded this formation belongs to the generation of the human being. But, the substantial form is not the principle but the term of generation.

2. Other scholastic philosophers hold the view that the human soul is created at conception. They admit that the soul does not exercise all its powers at once, but successively as the human organism becomes developed for the purpose.

Reasons for the View.

(a) It is an acknowledged principle of philosophy that beings must not be multiplied without necessity. Now, there is no need for a series of souls in the production of the human being since the rational soul can effect in the development of the embryo whatever the inferior souls would produce, if they alone were present.

Wherefore, as soon as the embryo has a rudimentary organization which is sufficient for the exercise of vegetative life, there is a sufficient reason why the human soul should be created and united with it.

(b) According to physiologists and biologists the human embryo from the start is nourished by *organic* alimentation after the manner of an animal or a grown-up person, and not by *inorganic* alimentation as is the case with plants.

(c) No reason seems to be forthcoming to show why the purely vegetative soul should dispose the embryonic body for the "eduction" of the sensitive soul, or why the sensitive soul should perfect the body for the reception of the rational soul, which in one formative progress of the organism exercises the vegetative and sensitive functions.

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INDEX

- ACTIVITY, immanent, definition of, 6; nature of, 9.
- APPETENCY, definition of, 58, 108; division of, 58 ff.; sensitive, 59, 122; difference between sensitive appetition and sensitive cognition, 59; organ of sensitive appetition, 66 ff.; rational, 122.
- ASSOCIATION, theory of, 94, 108.
- COGNITION, definition of sensitive, 32, 34; principle of sensitive cognition, 36 ff.
- COGNITIONAL DETERMINANT, definition and nature of, 33.
- COMMON SENSE, existence, nature and object of, 45 f.; in animals, 72.
- COMPOSITION, chemical, in living beings, 11.
- CONCEPTUAL DETERMINANT, 116, 118.
- DARWIN, CHARLES, 23, 76.
- DETERMINISM, theories of, 129.
- EMANATION, theory of, 161.
- EMOTIONS, nature of, 62 f.; influence of, 63 f.; division of, 65 f.
- EVOLUTION, theories of, 25; theory of mental evolution, 95.
- FACULTY, general definition of, 12; classification of, 12; rational, 85 f.; division of rational faculties, 87.
- FECHNER, 16.
- FEELINGS, nature of, 60 f.
- GENERATION, spontaneous, 19 ff.
- GOOD, definition of, 123; division of, 124.
- GROWTH, nature of, 11, 14 f., 18.
- HERTWIG, OSKAR, 23.
- HUXLEY, THOMAS, 21, 22.

- IDEA, universal, 91 ff.; universal ideas and sensation, 96; immaterial, abstract, 97; difference between ideas and sense-perception, 99, 103; erroneous theories of the origin of ideas, 107 ff.; scholastic theory of the origin of ideas, 114 ff.
- INDIFFERENCE, of will, 139; active, 140.
- IMAGINATION, definition of, 52; nature of, 53; reproductive and creative, 54 f.; in animals, 73 f.
- IMMORTALITY, definition and nature of, 149 f.; argument for, 150 ff.
- INNATE IDEAS, theory of, 111.
- INSTINCT, nature of, 55, 77, 78; in man, 55 ff.; in animals, 74 f.; Mercier's definition of, 81 f.
- INTELLECT, nature of, 91 ff.; object of, 100 ff.; a spiritual faculty, 103 ff.; dependence on the organism, 107; active and passive, 116 ff.
- INTELLIGENCE, nature of, 78; animals do not possess it, 80 ff.
- JAMES, WILLIAM, 94, 129, 147.
- JUDGMENT, objectively indifferent, 139 f.
- LANGUAGE, origin of, 114.
- LIBERTY, definition of, 128; elements of free action, 128; views regarding liberty of will, 129 f.; arguments for liberty of will, 130 ff.; nature of, 139 ff.
- LIFE, definition of, 5; vegetative, 14 ff.; theories of, 19 ff.; sensitive, 31 ff.
- MAHER, MICHAEL, 69, 86.
- MATERIALISTS, view regarding organic life, 7; regarding spontaneous generation, 19 f.; regarding sensation, 37; regarding self-consciousness, 88; in reference to the intellect, 104; in relation to ideas, 108; view of freedom of the will, 129.
- MEMORY, definition and division of, 47; retention, 48; recall, 48 f.; laws of, 49 ff.; recognition, 51 f.; organ of, 52; in animals, 73.
- MERCIER, CARDINAL, 78, 81.
- MOORE, B., 23.
- MOVEMENT, nature of, 6; spontaneous, 16; reflex, 77.
- NUTRITION, nature of, 11, 14 f., 18.

- OCCASIONALISM, theory of, 155.
 ONTOLOGISM, theory of, 110.
 PANPSYCHISM, theory of, 15.
 PASSION, definition and nature of, 61.
 PASTEUR, LOUIS, 22.
 PERSON, definition of, 156.
 PHANTASMS, concomitant, 92; characteristics of, 92 ff.;
 symbolic, 93, 98; in relation to universal ideas, 96 f.;
 in relation to abstract ideas, 99; in relation to the
 origin of ideas, 119 ff.
 PLATONIC IDEALISM, theory of, 109 f.
 PLEASURE, sensitive, 74.
 PRE-ESTABLISHED HARMONY, theory of, 155.
 PROPERTIES, of living beings, 110 f.
 PSYCHO-PHYSICAL PARALLELISM, theories of, 154.
 PSYCHOLOGY, definition and scope of, 3; comparative
 or animal, 69 ff.; rational, 85 ff.
 REDI, FRANCESCO, 21.
 REPRODUCTION, nature of, 14 f., 18.
 SELF-CONSCIOUSNESS, importance of, 87; nature of,
 88; concomitant and reflex, 88 f.; objects of, 90; proof
 for the spirituality of the intellect, 106 ff.
 SENSATION, definition of, 16, 32; seat of external sen-
 sation, 40 ff.; in animals, 70 ff.
 SENSES, external, 41 ff.; internal, 43 ff.; internal senses
 in animals, 72 ff.
 SENSISM, theory of, 94, 108 ff.
 SIMPLICITY, nature of, 146 f.; of the soul, 147 ff.
 SOUL, definition of, 142; substantial principle, 142 f.;
 its spirituality, 143 f.; simplicity of, 147 ff.; immortal-
 ity of, 149 f.; union with the body, 154 ff.; oneness
 of, 157 ff.; creation of, 161 f.; time of union with the
 body, 164 ff.
 SPEECH, nature of and requirements for, 79 f.
 SPENCER, HERBERT, 23.
 SUBSTANTIAL FORM, definition of, 158; soul is sub-
 stantial form of the body, 159 f.
 TRADITIONALISM, theory of, 112 ff.
 TRADUCIANISM, theory of, 162.

TYNDALL, JOHN, 23.

VALLISNIERI, ANTONIO, 21.

VIRCHOW, RUDOLPH, 23, 24.

VITAL PRINCIPLE, definition of, 8; nature of, in plants, 26 ff.; in animals, 83 f.; classification of, 26; substantial form, 28; divisibility of, 29 f.; oneness of vital principle in animals, 82 ff.

WASMANN, ERIC, 69, 78.

WILL, definition of, 122; object of, 123, 125 ff.; superior to sensitive appetency, 124 ff.; freedom of, 126 ff.; arguments for freedom of the will, 130 ff.; control of the will over the other faculties, 136; will and intellect, 136 f.; will and evil, 137 f.











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